

ccj COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



Only **REO** offers 3-way custom tailored transportation

By choosing his weapon wisely,
Dave knocked his opponent dead.
Today, REO gives you 3 chances,
of chopping down 'overhead.'

1. **BUY REO... AMERICA'S TOUGHEST TRUCK...** Looking for the lowest cost miles in trucking? You'll find the answer in Reo's famous *Gold Comet* power, more payload design, shorter turning radius, easier maneuverability and lower cost maintenance.
2. **BUY REO PLUS GUARANTEED MAINTENANCE...** You know exactly what every single mile will cost with Reo's P.O.L.A.R. Plan. A fixed low cost buys Parts, Oil, Lubrication, Adjustment, Repair. That's wonderful profit insurance.
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*now available in most areas.

FREE SURVEY OF YOUR NEEDS, SEE YOUR REO DEALER OR WRITE:

REO MOTORS, INC., LANSING 20, MICHIGAN



"P-I-E has standardized on Dodge for its San Francisco-Oakland fleet"

Why new DODGE "Job-Rated" TRUCKS are the BIG CHOICE of BIG FLEETS

HIGH-POWERED FOR THE LONG PULL!

You can count on new Dodge trucks to meet tight schedules! Seven big engines—three of them all-new—from 100 h.p. to 171 h.p. Twin carburetion and exhaust systems in heavier models. With Dodge you're sure of the *right* power for your job. Not too little power—that causes unnecessary strain and wear on the engine. Not too much power—that costs you money in wasted gas and oil. The right power, plus famous Dodge handling ease, saves time and money!

TRIM HAULING COSTS TO LOWEST LEVEL!

New Dodge "Job-Rated" trucks offer high compression ratios to help you get greater fuel economy. Four-ring pistons and chrome-plated top rings lengthen the time between oil changes. Positive-pressure lubrication, floating oil intake and two fuel filters are among the features that cut upkeep—keep your trucks on the road and on schedule! Get more truck for your money—see or call your friendly Dodge dealer soon.

... says C. E. JOHNSON, Executive Vice President, Pacific Intermountain Express, 299 Adeline St., Oakland, Cal.

"Pacific Intermountain Express now owns and operates a fleet of fifty-four Dodge 'Job-Rated' trucks in the San Francisco-Oakland Bay area. We have found that the greater horsepower and increased cubic-inch displacement of our new Dodge units are ideal for the hilly terrain of this territory.

"From the company standpoint, maintenance costs for Dodge are extremely low and operating economy is most rewarding. From the driver standpoint, our Dodges handle easily and have exceptional flexibility in alleys, on narrow streets, and in traffic. These are some of the reasons why P-I-E has standardized on Dodge for its Bay area pick-up-and-delivery fleet ... and why we are going to keep on buying dependable Dodge trucks in the years to come!"

DODGE

"Job-Rated" TRUCKS

Enjoy Dodge hospitality, Room 2227, The Biltmore, A.T.A. Convention



CLEAN
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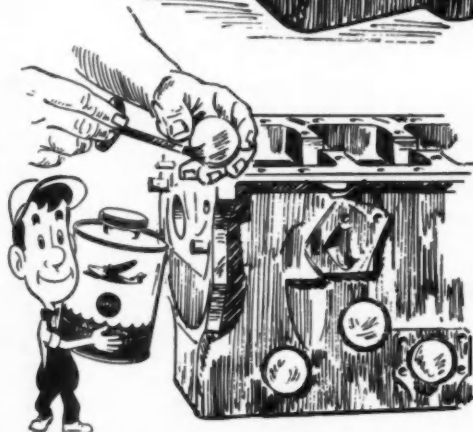
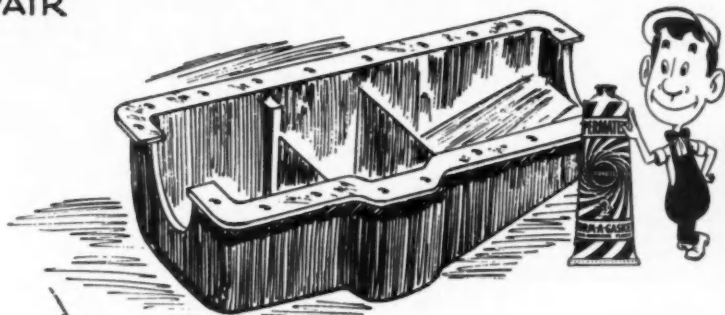
Saves Corroded Cylinder Heads

CLEAN OUT CORRODED AREA THOROUGHLY. BUILD UP FLUSH AND SMOOTH WITH **FORM-A-GASKET NO.1** - LET STAND UNTIL SET. BRUSH **FORM-A-GASKET NO.3** ON BOTH SIDES OF HEAD GASKET AND YOU'LL HAVE A PERMANENT REPAIR



Emergency Gaskets

A GOOD COATING OF **FORM-A-GASKET NO.2** ON TIMING GEAR COVERS, OIL PANS, ETC. WILL MAKE A PERFECT OIL SEAL WHEN GASKETS ARE NOT AVAILABLE



On Expansion Plugs

A COATING OF **FORM-A-GASKET NO.3** BRUSHED AROUND THE RIM AND INNER SURFACE OF EXPANSION PLUGS - WHEN MAKING REPLACEMENTS - WILL ELIMINATE SEEPAGE. PLUGS WILL ALSO PUSH OUT EASILY SHOULD THE BLOCK FREEZE



Form-A-Gasket withstands the enormous pressures of modern high compression engines. It is unaffected by gasoline, hot or cold oil, grease and water, anti-freeze. Always say PERMATEX Form-A-Gasket when you order sealing compound.

EVERY SHOP NEEDS ALL THREE TYPES

- No. 1 - Sets quickly. Dries hard.
- No. 2 - Sets slowly. Remains pliable.
- No. 3 - Brushable. Sets to a paste. Remains tacky.

FORM-A-GASKET.

PERMATEX COMPANY, INC., BROOKLYN 35, N. Y.

MORE THAN 50 CHEMICAL PRODUCTS FOR BETTER AUTOMOTIVE MAINTENANCE

COMMERCIAL CAR

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EDITORIAL CONTENTS

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Is Speed the Real Villain?	64
Facts indicate it may be scapegoat for real, underlying cause	
Special Stamp Marks Industry's 50th Year	67
It honors first commercial vehicle performance test held in 1903	
A Capital Approach to Better Shop Equipment	68
Ideas for better bus maintenance gathered right in a fleet shop	
Modern Fleet Shop Designed for Efficiency	72
Few fixed walls, plenty of overhead doors streamline maintenance	
Powered-Van Uses White Engine	75
With engine in rear, all component parts are hung from body floor	
The Warner Electric Brake	78
"Facts for Fleets" summary shows operation and construction detail	
Bakery Writes Recipe for Higher Shop Output	80
Delivery fleet reports how it stretched use of cramped facilities	
Traveling Records Carry Full PM Story	82
They cut East Texas Motor Freight's maintenance costs 6 per cent	
Trailmobile's 9-Foot Tandem Ups Payload	84
It benefits operators in bridge formula states and heavy haulers	
Beefed-Up Tractor Ups Payload by 2½ Tons	85
Trailing axle and higher hp engine do the trick for this operator	
Cold Weather Driving Problems	86
An SAE report on recent research in low temperature operation	
A Look at Alternator Systems	87
Features of a.c.-d.c. electric systems adapted from an SAE report	
Dorsey's Fleet Chief Capped with Plastic	88
Damage reducing feature also lets light in forward end of trailer	

Short Articles

Strick "Sky Lite" for Trailers	88
Lift Truck Safety Competition	130
Driver Safety Breakfasts	137
Fleet Training Courses	138
Gemmer Linkage Power Steering	160
Fatigue Costs Money and Time	168
Photos Figure in P.R. Programs ..	174
Fast Trailer Repair Unit	192

Departments

The Overload	5
At Your Service	9
Dates and Doings	20
Laugh It Off	54
Bulletin Board	56
CCJ News Reports	
Washington Runaround.....	58
Detroit Dispatch.....	60
October Roundup.....	62
Shop Hints	76
Free Publications	89
New Products	90
New Truck Registrations	94
Truck Specifications	97
Fleetman's Library	162
Legal Corner	164
Factory Flashes	180
Fleet Notes	182
Introducing	184



COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

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Is Speed the Real Villain?

Safety Engineer Donald S. Buck takes a close look at accident "causes," comes to the conclusion that speeding may not be as great a factor in the nation's accident toll as reports would seem to indicate. Here's what happened when safety experts were asked to report on the cause of an accident staged for their benefit. Page 64.

Stamp Marks Trucking Anniversary

A commemorative stamp marking 50 years of truck transport will be issued in conjunction with the American Trucking Assn.'s convention at Los Angeles. Birthday background and a report of the first official recognition of the trucking industry are on page 67.

Equipment Ideas From Capital

Nine practical ideas from the shop of Capital Transit Co. of Washington are described and illustrated to show bus men how shop-built units can cut operating costs. Page 68.

Modern Shop Stresses Simplicity

Asbury Transportation System has a new maintenance shop that omits ruffles but provides streamlined service facilities. Details of shop construction and equipment are on page 72.

Maintenance Information?—It's In the Book

Mechanics at East Texas Motor Freight Lines need waste no time looking up the service history of the trucks they are working on. A complete record is carried in each unit and is kept up to date as work is performed. Eliminating duplicate servicing and much wasted time, the fleet's new maintenance program has reduced costs from 21 to 15 per cent of gross revenue. Page 82.

Boosting Load Limits—Legally

Two approaches to the problem of increasing payload while meeting gross weight restrictions: Trailmobile Inc. presents a nine-foot tandem for heavy haulers which boosts permissible load under the bridge formula; Boling Truck Service modifies its tractor and adds a trailing axle to boost capacity by 5000 lb. Pages 84, 85.

A Look At Alternators, Cold Weather PM

From the recent meeting of the Society of Automotive Engineers are these discussions of the merits and application of alternator systems for trucks and buses and some new ideas on cold weather engine operation. Pages 86, 87.



There's no such thing as normal conditions in the fleet business!

A pitchblack night. A wet snow. And down below the floor boards a BLUE STREAK dimmer switch is getting a constant bath in soaking wet slush . . . and taking it in stride.

The BLUE STREAK dimmer switch is housed in a die-cast Zamac case. A molded bakelite face plate spun on a velumoid gasket hermetically seals the switch and positively prevents the entrance of moisture and dirt. Never any risk of rust, corrosion, or dirt killing a truck's lights here.

In production life tests this BLUE STREAK switch withstood 465,412 consecutive operations, the equivalent of 14 years actual service. Only a BLUE STREAK switch with oscillating type positive snap action could stand up like this.

This BLUE STREAK switch costs only a little more. But when a driver, a truck, a cargo are at stake pennies don't seem to matter. Call your jobber, or write STANDARD MOTOR PRODUCTS, INC., 37-18 Northern Boulevard, Long Island City 1, New York.



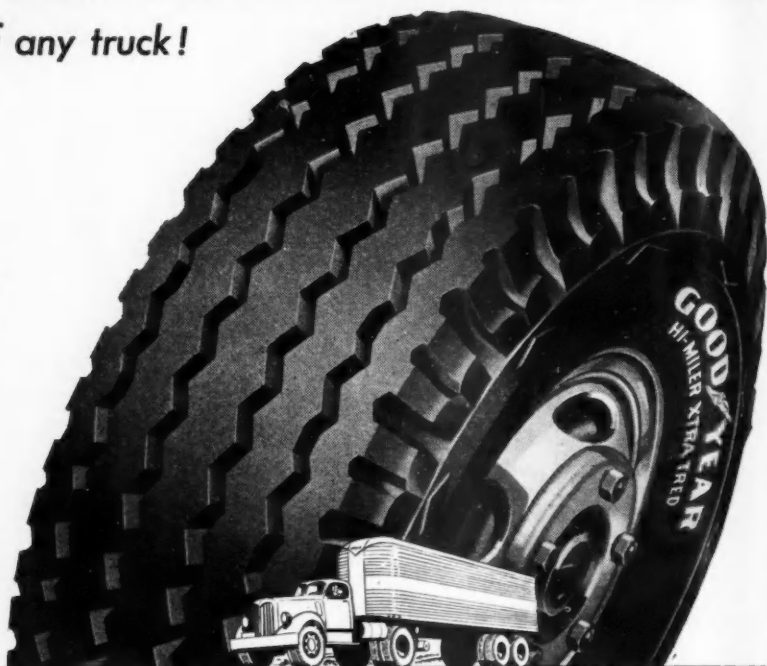
HERE'S WHY YOU SHOULD USE THIS TIRE ON HIGHWAY HAULS TOO TOUGH FOR OTHER HEAVY TREADS

— and USE it on any wheel of any truck!

NEW XTRA TRED

NEW from super-tough rubber compound to cooler-running shoulder vents and rib grooves expressly designed to prevent cracks. *Truckers report up to 54% more mileage than even previous Xtra Treds!* But *you're* interested in what it can do for *you*—so why not find out?

Get the NEW Xtra Tred in RAYON cord for average conditions—or in ALL NYLON for hauls too tough for any other heavy tread tire!



HERE'S WHY YOU SHOULD USE THIS TIRE FOR ON-OFF THE ROAD AND FOR STOP-START SERVICE

— from city deliveries to construction hauling!

DOUBLE-DUTY ROAD LUG

Super-tough rubber and heavy lugs offset tread wear. Armored sidewalls shrug off curb-pinches, sidewall scraping, stones, snags, potholes and tire-punishing ruts. Crossbar tread pattern has plenty of *bite* for bad footing—and positive traction, forward or reverse.

Despite all this, the Double-Duty Road Lug rolls smoothly on paved roads, wears long and evenly, saves you money every mile of the way! Goodyear, Truck Tire Dept., Akron 16, Ohio.



Xtra Tred, Road Lug—T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

We think you'll like "THE GREATEST STORY EVER TOLD"—every Sunday—ABC Radio Network—THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

The OVERLOAD

E D I T O R I A L C O M M E N T

Flat Car Propaganda Needs Good Brakes

THE trailer on railroad flat car movement is gathering momentum fast. Our research in recent weeks included on-the-spot coverage of the two most important developments to date—Pullman-Standard's model array in Chicago and General Motors' full-scale operations at LaGrange, Ill.

But as we probed for technical details (still speculative as this issue went to press; see page 60), we found these details being overshadowed by a brand new threat to the truck industry's public relations.

We remembered that as far back as the early 20's the railroads, with rare exceptions, have turned thumbs down on the trailer flat car ideas. We also remembered how these same rail executives turned down the diesel locomotive idea until General Motors woke them up with a shiny new diesel at LaGrange.

Now from the same plant comes the promise of volume production of special flat cars for trailers. Once again the automotive industry may be handing the railroads a great new opportunity. If they buy it, what will they do with it particularly from the propaganda point of view?

At month's end we found ourselves pondering this aspect with even greater interest than such important details as the rate-per-mile, the speed of service or the labor point of view. Then the bomb dropped.

It came in the form of an article in *Look* magazine's issue of Oct. 6. Here at last, said the article, was a means of getting "our highway monsters off interstate roads . . . those freight-carrying trailers that clog traffic, pulverize pavements and frequently bring fiery death to truck drivers and motorists."

Great holy cow! Now, instead of just cussing those g-d trucks on the highway, that lordly soul—the motorist—will be saying "why the h— aren't they on the rails."

While *Look* itself points out that truck trailers alone traveled 13 billion miles in 1951, it completely overlooks the slight technical problem of getting all

of them, or part of them, or $\frac{1}{2}$ of 1 per cent of them on the rails overnight. Proudly it leads off with this cliché: "Every motorist who has crept and cussed uphill behind a chugging semitrailer-truck will welcome the hottest news in highway transport. . . ."

Also nicely overlooked are a few incidental details, i.e., the fact that there are about 25,000 communities that have *no rail service*; or the fact that the rail tie-in can *only* work between major terminals; or that a guy named Dave Beck may be interested. *Look* handles that last one nicely enough: "Everyone will be happy, particularly the wives of long distance truck drivers . . . who try to pass in the night and sometimes don't quite make it." Might we add a final sentence? It's more fun to stay in bed than work!

Of course the rail trailer idea makes sense and we are the first to hope that it may be a means of making more money for both truckers and railroads. In the bargain there is a good chance that it may relieve a tiny fraction of highway congestion between certain key cities.

But if the *Look* article reflects what is to be the railroad propaganda line, there's trouble ahead. Let's sincerely hope that this worthwhile project won't get loused up in the smoke of a new propaganda war. The viewpoint of a group of Chicago truckers appears sound. They are approaching the problem in the same manner that the male porcupine makes love to the female—with extreme caution!

P.S. CONGRATULATIONS to *Cars*, a relatively new magazine published by Fawcett Publications, Inc., Greenwich, Conn., for its excellent October article "The Secret War Against Trucks." Based largely on pre-trial depositions in the Pennsylvania truck-rail case, it tells at least some motorists what the rails are really up to.

Bart Rawson
Editor

MORE MILES PER GALLON OF FUEL



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At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION

by MURRAY SIMKINS Managing Editor

Fuel Selection for Diesel Engines

THE selection of fuel for diesel engines is very important from the standpoint of operational costs, says W. W. Edwards, of GMC Truck and Coach Division. The proper grade of fuel for the GMC diesel has the following specifications: 600 deg end point maximum; 320 deg initial boiling point; .5 per cent sulphur. Low end point is required for clean and complete burning; clean burning eliminates deposits in the air box and piston ring grooves which have a tendency to score pistons and liners. When high initial boiling point fuel is used, chances of the fuel turning into a gaseous state in the fuel system is reduced. This is a major factor in horse power loss and in short injector life.

Fuel with a .5 per cent sulphur or less does not leave harmful residues that lead to scoring of liners. And of course a major consideration in reducing scoring and wear is fuel cleanliness. Careless handling and storage practices, permitting dirt and foreign material to contaminate the diesel fuel, is a major cause of premature engine wear.

Caution—Fragile Battery

WILLARD Storage Battery Co. has been making an analysis of scrapped batteries—finds that 55 per cent of all battery failures is due to over-charging. Current surveys indicate that a great majority of the other failures result from case damage. Careless handling during removal or installation, too tight or too loose clamping in the carriage, damage from accidents figure high in the causes of case breakage.

Tank Truck Safety Switch

A NEW type of battery disconnect switch and battery cable, developed by the automotive section of The Atlantic Refining Co., has proved so effective that it has been made standard equipment on all 500 of the company's tank trucks.

This new device is attached to the battery ground lead and may be disconnected quickly by turning the switch a one-quarter turn counter clockwise and pulling it apart. It is located on the frame rail of the tank truck directly behind the cab.

One of the chief purposes of the installation is to

provide a means of immediately eliminating current from all vehicle wiring in case of an electrical fire or other emergency. It is also used as a positive disconnection when the vehicle is being repaired, or when the truck is to be parked unattended for an extended period of time.

Those 1960 Engines

RECENTLY Max Roensch, of the Ethyl Corp., predicted that powerplants for 1960 vehicles will have greater specific outputs, use less fuel per brake horsepower, and have durability equal or better than that obtained on the best of today's design. He says that 1960 engines will have:

1. $\frac{1}{2}$ brake horsepower per cubic inch for gasoline and .4 brake horsepower per cubic inch for diesels.
2. A compression ratio of 7.5 or higher, and a 20 per cent improvement in economy for diesel.
3. Durability superior to present.
4. Lighter engines both on a brake horsepower and total weight basis. Diesel engines will be available weighing only 5 to 7 lbs per horsepower.
5. Weight per brake horsepower better with power plant total net equal or less than at present.

Safety Council Tests Chains

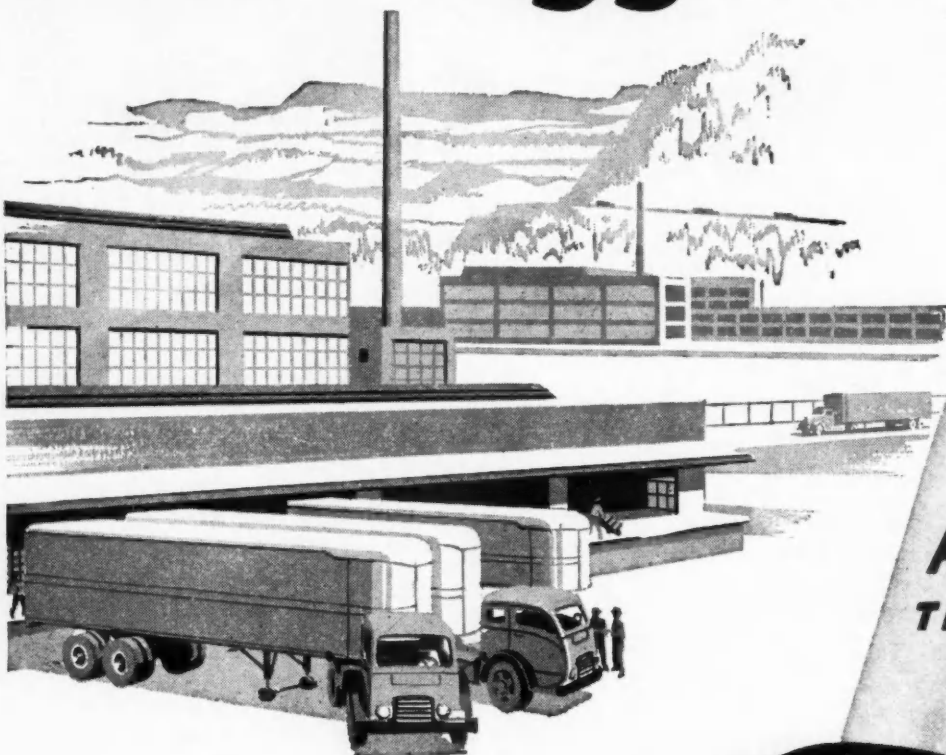
ALL types of tire chains decrease vehicle stopping distance on ice, but some do the job much better than others, according to the National Safety Council's Study of Winter Driving Hazards.

In the first of several reports covering the 1953 test project, the committee announced the results of stopping and traction tests on a 4 x 2 tractor and tandem trailer. When locked wheel stops were made on glare ice from 20 mph, an average of 191 ft was required to bring the vehicle to a stop when no chains were used. Various types of chains reduced this average by distances ranging from 31 to as much as 131 ft.

The stopping distance was reduced an average of only 31 ft—from 191 to 160 ft—when four unit or emergency type chains were placed on the outer rear wheels. Stopping distance was reduced an average of 131 ft—191 to 60 ft—when reinforced dual triple side chains were placed on both the outer and inner rear tires.

(TURN TO PAGE 12, PLEASE)

This Rugged Plug...



- ★ **AIRCRAFT TYPE INSULATOR**
Offers maximum resistance to heat and reduces fouling.
- ★ **HEAVY ELECTRODES**
Give long gap life which contributes to low service costs by requiring re-gapping less often.
- ★ **RUGGED CONSTRUCTION**
Especially suitable for the most severe bus and truck operation.

Auto-Lite Spark Plugs—Patented U.S.A.

*You're always
right
with AUTO-LITE*



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Mondays . . . CBS Television Tuesdays

can Increase Your Payload Profit

AUTO-LITE

TRANSPORT SPARK PLUGS

Cost less per mile of spark plug operation!

FLEET OPERATORS know that spark plugs are a big factor in engine performance that can cut mileage costs and keep trucks on schedule.

Doesn't it make good sense that the men who design and build all the parts in the electrical and ignition system of your truck or car should be best qualified to give you the best in spark

plugs to assure top performance?

Auto-Lite Transport Spark Plugs are designed by Auto-Lite ignition engineers to deliver low cost per mile of spark plug operation . . . and to help increase payload profit. Prove this with a test made in your own way in your own fleet of trucks or buses. See your Auto-Lite supplier or write to

Toledo 1, Ohio

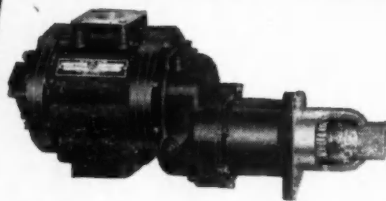
THE ELECTRIC AUTO-LITE COMPANY
Spark Plug Division

Toronto, Ontario

COMMERCIAL CAR JOURNAL, October, 1953

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Starting

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AIR
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Motors



Where there is danger of fire or explosion, Leece-Neville Air Cranking Motors will start diesel, gas or gasoline engines with complete safety. Whether air cranking is preferred for safety or other reasons, you can rely on an L-N Air Motor for ample cranking power regardless of low temperature or infrequent use.

Model shown is rated at 25 HP nominal at 100 p.s.i.

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way, passenger car, railroad,
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Yes, send me the facts on L-N Air Cranking Motors

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**MAIL
TODAY**



At Your Service

Continued from Page 9

For other chains the stopping distance average were: single regular chains on outer tires only—130 ft; regular dual triple side chains on both tires—98 ft; single reinforced chains on outer tires only—91 ft.

Acting on a request from the Interstate Commerce Commission, the committee included tests on unit or emergency truck chains to determine the effectiveness of these chains as compared with full chains. Unit chains consist of two regular cross chains attached to two plates. A piece of chain of sufficient length to reach from one side of the tire around to the other side is attached to one plate, and a buckle or locking device is attached to the companion plate.

In addition to finding this type of chain inferior to the others in both stopping distance and traction ability, the committee noted a number of other disadvantages:

1. In the case of trucks which have spacers between dual tires, it is necessary to cut holes in the spacers in order to install unit chains.

2. Jackknifing and skidding are likely to be caused by the frictional forces developed when a unit chain on one tire is in contact with the ice while on the other side of the vehicle only the unprotected tire area between the unit chains is in contact with the ice.

3. The wheels may lock so that neither has a chain in contact with the ice, and the stopping distance is then the same as for tires without chains.

4. Four unit chains are recommended by the manufacturer but the construction of some wheels allows only three to be used.

Traction tests showed that chains which were most useful in stopping the vehicle also were most effective in terms of tractive effort. Four unit type chains gave more than three times the tractive performance of tires without chains. Most impressive were the results when reinforced dual chains were attached to both inner and outer rear tires. They increased traction more than nine times.

Why Springs Break

IS THE principal cause of spring breakage the simple explanation of steel crystallization, which is so commonly accepted, or are there other more fundamental reasons for spring failures?, asks F. J. Laher, of Laher Springfield and Tire Corp.

His answer is, definitely yes—there are two primary causes of spring failures that out-rank steel crystallization, perhaps by ten to one.

They are, first, the lack of uniform hardness or temper in every spring leaf or plate in a complete spring assembly. Second, the use of inferior and unsatisfactory steel in the manufacture of springs.

In a spring assembly, each individual leaf or plate (TURN TO PAGE 14, PLEASE)

RECAPPABLE CARCASSES INCREASED 150%

Lee Know-How Did It!

Here's the story of a big fleet owner with the problem that plagues haulers in many rural areas: too many stones!

PROBLEMS

1. Sixty percent of tires blown out because locked-in stones worked through treads into carcasses.

2. Tires not blown out were damaged by stone cuts which let in dirt and moisture.

Operation—Wholesale grocer hauling to retail stores in small Arkansas communities.

Equipment—Straight trucks and tractor-trailers.

Axle Loads—Heavy at beginning of run.

Speeds—Normal.

Roads—All kinds. Many gravel roads littered with small, hard stones.

Tires Used—Regular highway

tires, sizes 8.25-20, 9.00-20, 10.00-20.

RECOMMENDATIONS

Lee recommended the Lee 5-rib Highway tire for three reasons:

Because this tire has an open, self-cleaning design with wide-angle traction grooves. As soon as the wheels start turning, stones and pebbles are thrown clear. It is thus virtually impossible for them to lock in the tread and cut the tire carcass.

Because the tread of the Lee 5-rib Highway tire is made of special compound for maximum resistance to wear over all types of roads.

Because the high twist, low stretch Double-Life cord used

in the Lee 5-rib Highway tire gives the carcass the extra strength needed for multiple recapping.

RESULTS

1. **No more blowouts** as the result of stone cuts.
2. **Long mileage** over the many kinds of roads this fleet must cover.
3. **Increase of 150%** in the number of tires available for recapping. And many tires are being recapped several times.
4. **Important savings** in tire cost per mile, along with the elimination of most tire problems.

• • •

Perhaps stone cuts aren't your problem. But if you are having tire trouble in your fleet, Lee men and Lee know-how can help you get full mileage and have more carcasses for recapping. If a tire problem has you stumped, bring it to Lee.

Lee Rubber & Tire Corp., Dept. 2-K
Conshohocken, Pa.

Please send me information about your special engineering survey for truck fleets.

Name _____

Company _____

Address _____

H.D. Commercial	5-Rib Highway	7-Rib Highway	Extra Tread— Delivery Service	Logger— Rural Service	Cleat Rib	Cleated Tread	Cleated Tread Special
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LEE RUBBER & TIRE CORPORATION CONSHOHOCKEN, PA.



HEAVY DUTY CLUTCH PLATE

- standard-drilled extra-heavy facings wear better
- heat-treated multiple-riveted hub & disc last longer
- self-aligning splines install easier

Write for Name



of Nearest Jobber

Accurate PARTS MFG. CO.

12435 EUCLID AVENUE • CLEVELAND 6, OHIO



At Your Service

Continued from Page 12

must carry its relative proportion of weight. If one or more spring leaves are soft and inadequately tempered, they will retard the active members of the spring assembly and thereby cause spring breakage by the simple process of bending, as you bend a piece of wire between your fingers until it breaks. The weight of the vehicle bends the soft members of the spring down and the active members of the spring force them up again, producing a wire breaking action. This accounts for many broken spring leaves, upon examination, being soft when they are generally expected to have been too hard.

Therefore, it is not hard to see that the balance of the spring leaves in a spring assembly with a number of soft members (or too hard, which would break at once) cannot last long, for they are now carrying more weight and are subjected to a great deal more strain than would have been the case had all the members carried their full share. Hence, the consequences—breakage of the leaves that did all the work, by premature crystallization, caused by overstrain and vibration.

Heavy truck springs that are short and use thick plates or leaves are often made with some success in plants inadequately equipped for hardening and tempering. The reason and difference is that these short heavy equipment truck springs with many thick heavy leaves—often twenty or more—result in a mass piling up process that carries weight more by bulk and friction than by tensile strength.

What's New? by Joseph Geschelin

OUR ears to the ground indicate some striking new developments which may blossom by the end of this year. One of these is a uniquely designed air brake system for installation in light weight motor trucks. If and when this is officially announced, it will give the smaller jobs all of the fine stopping advantages now enjoyed by the big rigs.

Early this year we mentioned a new type of air power steering system for trucks and buses, particularly useful on vehicles already equipped with an air compressor and reservoir. It has taken longer to develop the job to its production stages than was originally expected. However, we are assured it will be announced in CCJ, probably immediately after January, 1954.

Another item of interest for fleetmen is some work being done with the development of sintered metal linings for motor truck brakes. The company engaged in this development has sold a considerable amount of sintered brake lining for replacement and is now pointing for a wider range of applications. As you
(TURN TO PAGE 18, PLEASE)

up to 30% extra tire mileage with these wide base rims

TIRES WEAR FASTER ON NARROW RIMS



WIDE BASE RIMS LENGTHEN TIRE LIFE



THE surest way to cut tire cost today is to change over to Wide Base Rims. That isn't a promise—it's a fact, proved by experienced operators who report up to 30% increase in mileage, depending on operating conditions, after changing to Goodyear 70 Series Wide Base Rims.

70 Series Rims are interchangeable with all demountable rims having the standard mounting bevel, eliminating need for costly wheel changes. They provide all the advantages of wide base tapered bead seat rims—greater air volume, cooler running temperatures, fewer blowouts,

more and better tires for recaps, fewer road delays.

To get the marked increase in mileage that results from these advantages, it will pay you to investigate Goodyear 70 Series Wide Base Rims today. Uniform in design through the entire size range, there's a rim for every tire size. Safe, strong, lighter in weight, these rims help explain why more tons are hauled on Goodyear Truck Rims than on any other kind. See your rim supplier or write Goodyear, Metal Products Division, Akron 16, Ohio.

GOODYEAR

WIDE BASE RIMS

We think you'll like THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

COMMERCIAL CAR JOURNAL, October, 1953



How This Shop Gets Better Operation From Steam-Cleaning Unit

Oakite Composition No. 92 avoids clogging, eliminates irritating vapors, cuts material-consumption 50%

This mid-west service shop needed a detergent that wouldn't scale up the coils of their steam-generating unit. It had to remove oil and grease-soaked soils, clean thoroughly and be easy on the nose and throat. Could Oakite fill the bill?

The answer was yes! Oakite Composition No. 92 was recommended for this job. The Oakite Service Man charged the equipment and then let the material sell itself on the job.

Here's what the operator then had to say . . . "That's just what we've been wanting. No fumes, and the stuff cleans much faster". What's more, only half as much cleaning material was needed.

Proving that—in industrial cleaning it always pays to consult Oakite.

This case history shows how Oakite prescribes specialized materials to meet the cleaning problems of garage, repair shop and grease pit. Whatever your need, you have over 80 different Oakite materials to choose from—and the help of a nearby Oakite Technical Service Man to help you get better cleaning at less cost

HERE'S HELP FOR YOU, TOO

How to do all the cleaning, descaling, derusting and many other jobs in and around garages and shops is covered in this free Oakite Booklet No. 4401. Send for your copy today. Oakite Products, Inc., 26D Rector Street, N. Y. 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. and Canada



At Your Service

Continued from Page 14

know, one of the most important features of sintered brake lining is that it is unaffected by high temperatures. The brakes will stop the vehicle on a grade or in an emergency without fail regardless of the amount of heat generated in the brake system.

We are told too that the metallic lining is able to retain heat longer and serves to dissipate it through the brake shoes as well as the brake drum. Since the drum is no longer required to absorb all of the heat developed in fast brake applications, the claim is made that on a number of test jobs they have shown a great improvement in brake drum life. That is good news indeed for operators of heavy duty equipment.

Bearing Cap Gaskets—Plymouth

RECENT tests show that best results will be obtained if the rear main bearing cap gaskets are installed absolutely dry. Coating the outer surface of the gaskets with soap will result in leaks.

When installing the neoprene seal, apply a little Lubriplate to the contacting lip and be sure that the lip is pointed toward the front of the engine. Carefully insert the lower half of the seal into the bearing cap and position the gap gaskets in place. Be sure that the tabs of the parting line seals fit in the cap seal channel.

Place one end of the upper seal into the block and push it into place with a rolling motion. Turn the crankshaft at the same time as pressure is applied if the seal is difficult to install.

Tighten the main bearing cap bolts to a torque of 80 to 85 ft lbs.

Studebaker Rear Axle

A 4.11:1 optional equipment rear axle ratio is now available on new 2R11 model trucks and also may be purchased to replace a rear axle or differential on 2R11 trucks (without overdrive) now in service. When the new ratio is used to replace one now in service, the speedometer drive gear and pinion must be replaced.

Wheel Bolt Spacers—IHC

ON R-130, L-130 series chassis equipped with Budd 16 in. dual wheels where wheel bolts loosening and breaking are encountered, this condition can be corrected by installing wheel bolt spacers IH No. 93 646 R1 (three used on each front and each rear wheel) on (alternate) mounting bolts, between the wheel and hub. The wheel must then be installed with the outward coined mounting holes on the same bolts as occupied by the spacers. Tighten wheel stud nuts to 175-200 foot pounds.



Why do fleets get better mileage, better braking with Grey-Rock Balanced Trucksets?

HERE ARE THE ANSWERS

"BALANCE" MAKES THE DIFFERENCE

Even in the same brake, different shoes do different work. It takes a balanced combination of different brake linings to equalize wear and to provide sure, safe stops for extra thousands of miles.

Riveted or bonded,
every piece branded
for your protection.

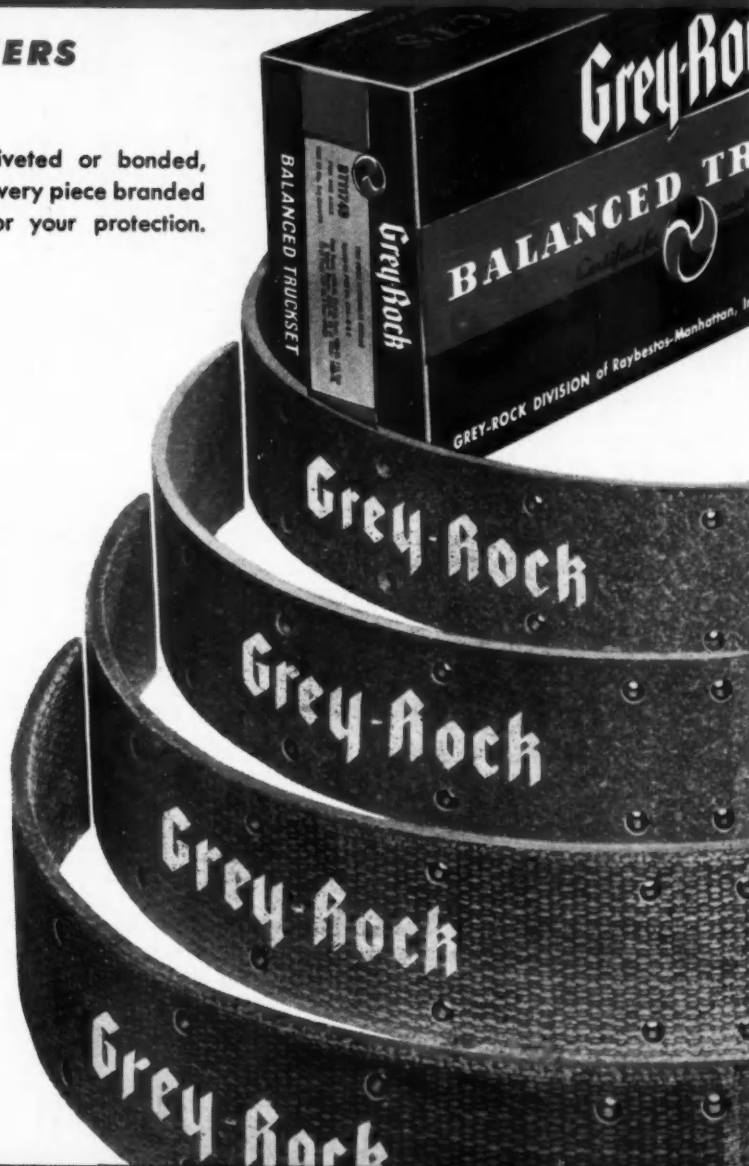
DISTINCTIVE WOVEN-MOLDED COMBINATIONS

In Grey-Rock Balanced Trucksets, special woven and molded linings are combined for the especially severe brake requirements of certain models of light trucks. Where used, these woven-molded combinations provide brake action *far better* than can be achieved with molded linings alone. In other sets, special molded types are used where all-molded combinations give best results.

FEWER ADJUSTMENTS, LESS DOWNTIME

With Grey-Rock Balanced Trucksets, containing the *right* combination of linings, fewer adjustments are needed. Trucks spend less time in the shop, more on the road, with less wear-and-tear on tires, transmissions and axles . . . hence, lower maintenance costs.

See your Grey-Rock jobber for
**FACTORY-BONDED
SHOE EXCHANGE**



Only **Grey-Rock** *makes*
BALANCED TRUCKSETS

BALANCED BRAKES • TRUCKSETS • BRAKE BLOCKS • VEE-LOCK CLUTCH FACINGS



GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.
RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber Products • Rubber Covered Equipment • Asbestos Textiles • Teflon Products • Packings • Sintered Metal Products • Abrasive and Diamond Wheels • Bowling Balls

FLEET CLEANING TIME CUT 80% WITH MALSBARY



MALSBARY Model 250 strips dirt-embedded grease from 5th wheel in 10 minutes (a 30-minute job with former steam cleaner) for Red Arrow Freight Lines, Houston, Texas.

With 120 tractors and a big fleet of trailers to keep in shape, Red Arrow maintenance crews really give their MALSBARY Model 250 steam cleaner a work-out. It is in use an average of 10 hours per day, 5 days a week—proof that MALSBARY simplicity and ruggedness "pay off" in reliable performance and minimum downtime.

Cuts Trailer Cleaning to 1½ Hours

MALSBARY's exclusive patented pumping system that delivers 2 to 4 times more pressure than steam vapor cleaners pays off, too. Red Arrow's trailer cleaning formerly required two men and was practically a hand job with a steam-vapor cleaner. Now one man does the job with a MALSBARY 250 and saves 80% in time!

Try a MALSBARY on your own job—the world's best proving ground. See for yourself how it cleans faster, at lower cost. Fill in the coupon NOW for an on-job demonstration.



Malsbary Mfg. Co., Room K-10,
845-92nd Ave., Oakland 3, Calif.

I am interested in—

- ☐ Free booklets on MALSBARY cleaners.
- ☐ On-the-job demonstration.
- ☐ Names of nearby MALSBARY users.

NAME _____ POSITION _____
BUSINESS _____
ADDRESS _____

**MAIL
TODAY!**

DATES and DOINGS

(For calendar of fleet courses, see page 138)

OCTOBER

- 11-13—National Defense Transport Assn., Annual Convention, Louisville, Ky.
- 19-22—American Trucking Assns., National Committee on Accounting, Autumn Meeting, Ambassador Hotel, Los Angeles, Cal.
- 19-23—National Safety Council, National Safety Congress and Exposition, Commercial Vehicle and Transit Safety Sessions, LaSalle Hotel, Chicago, Ill.
- 26-28—National Lubricating Grease Institute, Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.
- 26-30—American Trucking Assn., Annual Convention, Hotel Statler, Los Angeles, Cal.
- 28-30—American Society of Body Engineers, Annual Technical Convention, Rackham Memorial Bldg., Detroit, Mich.
- 29-Nov. 1—Automotive Parts Rebuilders 1953 Convention, Sherman Hotel, Chicago, Ill.

NOVEMBER

- 2-3—Virginia Passenger Bus Assn., Annual Convention, Roanoke Hotel, Roanoke, Va.
- 2-4—Society of Automotive Engineers, Transportation Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 3-4—Society of Automotive Engineers, Diesel Engine Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 5—Southwest Shippers Motor Carrier Conference, Dallas, Texas.
- 5-6—Society of Automotive Engineers, Fuels and Lubricants Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 5-7—Idaho Motor Transport Assn., Annual Convention, Hotel Boise, Boise, Idaho.
- 7—New Hampshire Truck Owners Assn., Annual Convention, Hotel Carpenter, Manchester, N. H.
- 9-12—American Petroleum Institute, Conrad Hilton Hotel, Chicago, Ill.
- 9-12—Refrigeration and Air Conditioning Exposition (including truck refrigeration equipment), Public Auditorium, Cleveland, Ohio.
- 12—Maine Truck Owners Assn., Fall Round-Up, Lafayette Hotel, Portland, Me.
- 18-20—Arkansas Bus and Truck Assn., Annual Convention, Merion Hotel, Little Rock, Ark.
- 19-21—Montana Motor Transport Assn., Annual Convention, Florence Hotel, Missoula, Mont.
- 22-24—Florida Trucking Assn., Annual Convention, Hollywood Beach Hotel, Hollywood Beach, Fla.

DECEMBER

- 3-4—Associated Motor Carriers of Oklahoma, Annual Convention, Biltmore Hotel, Oklahoma City, Okla.
- 6-7—Missouri Bus and Truck Assn., Annual Convention, Hotel Jefferson, St. Louis, Mo.
- 7-10—Motor and Equipment Wholesalers Assn., Annual Convention, Conrad Hilton Hotel, Chicago, Ill.
- 7-10—National Standard Parts Assn., Hotel Sherman, Chicago, Ill.
- 8-9—Automotive Service Industries, Executive Booth Conference, Navy Pier, Chicago, Ill.
- 8-9—United States Chamber of Commerce, National Highway Conference, Washington, D. C.
- 10—Motor and Equipment Manufacturers Assn., Hotel Sherman, Chicago, Ill.

JANUARY

- 28-29—National Council of Private Motor Truck Owners, Annual Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 9-13—National Automobile Dealers Equipment Exhibition (including truck equipment), Miami Beach, Fla.
- 11-13—Truck-Trailer Mfrs. Assn., Annual Convention, Boca Raton Hotel, Boca Raton, Fla.
- 11-15—Society of Automotive Engineers, Annual Meeting, Sheraton-Cadillac and Statler Hotels, Detroit, Mich.

FEBRUARY

- 17-19—National Transport Vehicle Show and Fleet Maintenance Exposition, New York, N. Y.

Is this the 100,000 mile truck tire?

B.F. Goodrich

ALL-NYLON Traction Express



"130,793 MILES and they've never been off the wheels," says W. C. Merrill (above), Vice Pres., Merrill Truck Lines, Fort Worth, Texas, about four BFG Traction Express tires. Merrill drivers report no skidding with the new Traction Express tread.



SEVERAL HUNDRED TRACTION EXPRESS TIRES are used by Akers Motor Lines, Inc., of Gastonia, N. C. This common carrier serves the Atlantic seaboard with 1,008 units, is just one of many trucking firms that use and praise these BFG tires. Traction Express tires have open spaces in the shoulders and tread that dispel heat easily, prevent heat build-up at high speeds.

Gives more original mileage than a regular tire plus a recap!

147,000 miles for an Alexandria, La., bakery firm! 125,000 miles for a Memphis, Tenn., trucker! 110,000 miles for an oil company in Pipestone, Minn.! Yes, the new B. F. Goodrich *all-nylon* Traction Express is rolling up amazing original mileage records for truckers all over the country. And amazing recap mileage records, too!

The Traction Express tread is as much as 46% thicker than that of regular tires. This extra-mileage tread is compressed to resist abrasion, add mileage and reduce cutting. When molded, the Traction Express beads are close together. When mounted, air pressure spreads the beads to full rim width. Result: the sidewalls act as levers to compress the tread for long, even wear.



ALL-NYLON CONSTRUCTION

The Traction Express is designed with a strong, nylon cord body. Nylon withstands double the impact of ordinary cord materials, resists heat blowouts and flex breaks.

And the *all-nylon* B. F. Goodrich Traction Express is built with the patented nylon shock shield. Layers of strong nylon cords under the tread protect the tire body from road hazards.

With construction features like these, no wonder truckers call the Traction Express the 100,000 mile tire. You pay a little more for the *all-nylon* Traction Express, yet you get a tire that gives more original mileage than a regular tire plus a recap! It's available in rayon construction at lower prices. See your BFG retailer. His address is listed under Tires in the Yellow Pages of your phone book. Or mail the coupon below.



New distinctive tread design



Specify B. F. Goodrich tires when ordering new trucks

The B. F. Goodrich Company
Dept. TF-259, Akron 18, Ohio

Please send me:

- ☐ More information on the Traction Express tire
- ☐ The name of my nearest retailer
- ☐ Free book, "How to get more recaps out of truck tires"

Name _____
Company _____
Street _____
City _____ Zone _____ State _____



Laugh it off!

Si Perkins: "Zeke, whut in tarnation become of that city feller you'n's took on as a hired hand?"

Zeke Wilkins: "Oh, him. Why he usta be a truck mechanic, an' he crawled under one of the mules to see why it didn't go."

CCJ

FIRST TRUCK DRIVER: "YOU'LL BE INTERESTED TO KNOW THAT WE ARE PASSING THE LARGEST BREWERY IN THE UNITED STATES."

HELPER TRUCK DRIVER: "WHY?"

CCJ

Traffic Rate Clerk: "What's the best way to teach a girl to swim?"

Billing Clerk: "First you put your left arm around her waist, then you gently take her left hand and . . ."

Rate Clerk: "She's my sister."

Bill Clerk: "Oh! Push her off the dock."

CCJ

Warehouse Foreman: "Why is it, Simpson, that you are only carrying one carton into that truck when the other men are carrying two?"

Freight Handler: "I suppose they're just too lazy to make two trips the way I do."

CCJ

First Truck Mechanic: "Well, I guesh ish time tuh go home, Hank. It takes me an hour or sho to go to sleep when I go home."

Second Truck Mechanic: "Thash funny. I alwaysh fall ashleep ash shoona ash I hit da bed."

First Truck Mechanic: "Sho do I, but mv troublessh hittin' da bed."

CCJ

The tavern owner was awakened at 5:00 am by a loud pounding on the door. Stumbling sleepily to the window, he leaned out and yelled, "Go 'way! You can't have anything to drink at this hour!"

One-Legged Carburetor Specialist: "Who wansh anything tu drink. I left here at closing time wishout muh crutches."

HE WHO TAKES A SECOND WIFE—GETS A BRAND NEW LEASH ON LIFE.

CCJ

BUS MECHANIC: "Did you know that the cute little bookkeeper in the office has a wooden leg?"

BUS DISPATCHER: "No, I didn't, but if she has, it certainly is well-turned."

CCJ

The beauteous secretary to the Safety Director was enjoying herself immensely at the annual motor carrier association party and dance. One of her dancing partners noticed a ravel at the hipline of her net evening gown and pulled it.

Next morning, the young secretary was telling about the dance and said, "I had a perfectly wonderful time, but I can't figure out what became of my underwear."

CCJ

FREIGHT CLAIM AGENT: "THIS IS THE END! YOU'RE FIRED!"

O S & D CLERK: "FIRED! I ALWAYS THOUGHT SLAVES WERE SOLD."

CCJ

Steno Sue: "I'm warning you, he's a wolf. He'll rip the dress right off your back."

Steno Lou: "So what!—I'll wear an old dress."

"Cici Jay"



"Are you sure there isn't more to this costume?"

Judge: "You are charged with trying to kiss every woman on the bus. What have you got to say for yourself?"

Greasemonkey: "Well, your honor, when I read 'bus' means to kiss, and 'omni' means all—I figured 'omnibus' meant to kiss everybody."

CCJ

CITY BUS DRIVER: "BOY, WAS THAT BUS CROWDED. I SCRATCHED MY LEG AND THREE GIRLS SLAPPED ME."

CCJ

STENO SUE: "Whenever I go out with that handsome Commercial Car Salesman, I'm between the devil and the deep blue sea."

STENO LOU: "What do you do?"

STENO SUE: "Well, you know how I hate water."

CCJ

Doctor: "I have brought you a Red Cross nurse. I know she will keep you comfortable."

Truck Dispatcher (on sick list): "Take her back, please, and get me a blonde, cheerful one."

CCJ

President Fleety-Fleet Express: "Burlingame, I've noticed you sitting at your desk with your head in your arms for past hour. What's wrong with you?"

Operations Mgr. Fleety-Fleet: "Oh-h-h-h . . . I've been fishing through the ice, boss."

President: "Fishing through the ice. For what?"

Operations Manager: "Cherries and olives."

CCJ

Reluctant Rebecca: "I'm not going to park on a dark road with you. Contrary to what you say, there are lots of couples who don't pet in parked cars."

Auto Parts Clerk: "Yeah. The woods are full of them."

Resume Work

COMMERCIAL CAR JOURNAL, October, 1953

"Our Tire Maintenance Program Pays Big Dividends in Tire Mileage!"



This is what Lewis P. Hankins, Superintendent of Equipment, Hemingway Bros. Interstate Trucking Co., New Bedford, Mass., says:

"The money that is saved by proper tire maintenance can easily be the difference between financial success and bankruptcy for any fleet! We consider Schrader Valves, Valve Caps and Cores, Gauges and Airline Equipment essential to proper fleet tire maintenance.

"In each Hemingway Bros. terminal our tire maintenance men gauges and records tire pressures daily with a Schrader 7188BH Gauge. A Schrader 8106B Trutest Special Gauge is used regularly to check accuracy of all gauging-inflating equipment.

"A Schrader Valve Cap, which costs so little, controls a lot of money! Daily inspections include making sure that every tire valve has one."

Whether your fleet is big or small, it pays to use finest quality products. Specify Schrader when you order Tire Gauges, Tire Valves, Valve Caps and Cores, and all Airline Fittings from your supplier.

Mr. Hankins records tire pressure, while John S. Hemingway, Tire Maintenance Supervisor, uses Schrader 8106B Trutest Special Gauge.



Schrader

REG. U. S. PAT. OFF.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
470 Vanderbilt Ave., Brooklyn 38, N. Y.

CC BULLETIN BOARD

DRIVERS • MECHANICS • SAFETY MEN

Please Note!



School S-L-O-W

School's open—and your eyes better be. For thousands of kids will be crossing crossings and cutting corners and darting through streets you once thought deserted. And they will be wild as deer on the second week of the hunting season.

We gotta' save these kids, you know. Need them to pay the national debt. And that means caution—extra caution—on your part from 8 to 12 and from 12 to 8 every day of the week.

It's one thing to see one of these kids standing on a street corner waiting patiently for you to pass. But it's another thing to know that he hasn't stepped into your trailer on a turn. Happens far too often. It isn't your *fault* but that won't clear your conscience.

Sure they play in the street—after school, before school, even during school hours. And bouncing balls and rolling toys will be followed by careless girls and thoughtless boys. Anticipate them.

Now nobody wants to go around slaughtering kids. Every driver has the right intentions and the proper skill and the necessary experience to cope with these diminutive hazards. It's only a matter of assuming that an accident will happen if you don't give them every break in the book.

So anticipate an emergency and save a casualty!



You're sitting on top of the world in the **AUTOCAR** **V/8**

The new Autocar V/8 is giving truckers a new outlook on profitable transportation. The smooth performance of its great 200 horsepower engine steps up hauling schedules as much as 25 percent. There's nothing to touch it for making light of heavy loads. You should read the booklet on why the V/8 idea has every trucker talking. Send in the coupon for your copy.

AUTOCAR TRUCKS

THE WHITE MOTOR COMPANY
AUTOCAR DIVISION, ARDMORE, PA.

Factory Branches and Distributors from Coast to Coast
in the U.S. and Canada

Export: Drexel Building, Philadelphia 6, Pa., U.S.A.

The White Motor Company
Autocar Division, Ardmore, Pa.
Please send me the Autocar V/8 Booklet.

Name

Company name

Address

Number of trucks in fleet

Type of operation

3K

WASHINGTON RUNAROUND

by KARL RANNELLS Washington Correspondent

Go Slow . . . Still Good-By BMC

It looks as if the announced go-slow policy for reorganization of the Interstate Commerce Commission under new Managing Director E. F. Hamm, Jr., won't keep the Bureau of Motor Carriers from passing out of the picture. Opponents of the move may get another chance to be heard, but it isn't likely to affect the result. Work of the BMC still is slated for division and transfer to other bureaus. For example, the safety section would be transferred to a single bureau which would have jurisdiction over all safety work affecting all types of carriers including trucking.

Reorganization Progress . . . More Funds

Money is a factor in reorganization plans, not only with an eye to economical operation but also for adequate funds for future operation of ICC. In recent years, Congress has been tough on money matters, has talked bluntly, has accused ICC of inefficient operation. Congress leans to the Wolf report recommending reorganization along "functional" lines. Belief is that if Director Hamm can show progress in this direction, Congress will lend a more sympathetic ear to money requests.

Trucks . . . Chance for More Freight

Motor carriers are in good position to gain new business in two widely separated freight categories—if rates can be kept stable. Claiming big losses on such service, railroads last month asked the ICC for permission to boost rates by an average of 31.6 per cent for refrigerating perishable freight. Meanwhile, producers of steel and steel products, faced with definite prospect of having to absorb some or all freight charges in order to meet growing competition, will scan tariff schedules more closely than at present.

And . . . Perhaps More Mail

More changes are due in mail freight operations with the railroads likely to be the losers. Post Office Dept. will try out delivery of first class (3-cent) mail between Washington-New York-Chicago by airplane, whenever commercial liners have vacant space. This won't affect trucking contracts, now increasing for short hauls. But another experimental move will. This is to put rates on T-routes on a per sack basis instead of a mileage basis. Post Office say it will try it out in Texas.

Motor Carriers . . . Somewhat Safer

Certificated motor carriers are piling up a better record with respect to fatal accidents than last year, according to an ICC report covering the first four months of 1953. Statistic-wise, reported accidents were up by 800 to 10,106 for the period. But only 386 of these involved fatalities (against 432 last year) resulting in 496 deaths (compared with 546 for the same period 1952).

Air Cushions . . . to Stop Bounce

Pneumatic dunnage, actually large (32 by 72 inches) inflated pillows, is the latest wrinkle for use by the Army to protect military cargoes on overland hauls. Developed by joint effort of industry and Quartermaster Corps, the deflated dunnage is placed in space around supply items being loaded for shipment. Six to eight pounds of air are pumped in to protect and hold the cargo in place—saving labor and material.

Basic Industry . . . Going Strong

Basic industries apparently have no fear of a bust period in the near future. Latest Commerce Dept. Survey indicates American business will spend more (\$27.8 billion) for plants and equipment this year than last (\$26.5 billion). About two-thirds of the total will go into factories, industrial plants and public utilities. Truck fleets, transit systems, and waterways will spend about the same (\$1.4 billion). Railroads are retrenching by about 7 per cent to \$1.3 billion.

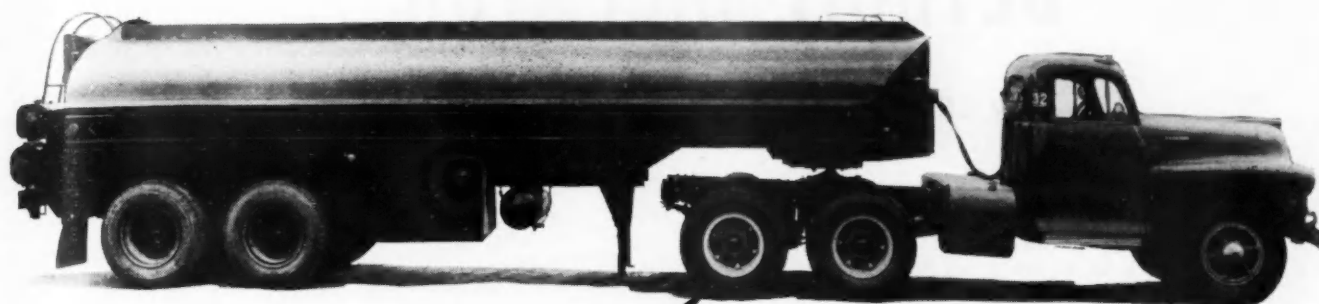
Taxes . . . Some Drop Expected

Complete scrapping of federal excise taxes on automotive items is not in the cards for next year, according to talk on Capitol Hill. But there's no reason to believe that automatic cuts won't go through on schedule as of April 1.

Government Workers . . . To Use Buses

Government workers on local official trips are likely to make more use of buses and other public transportation facilities in the future. Budget Director Dodge believes thousands of cars owned by federal agencies are getting some highly unofficial workouts. He's asked agency heads to report by Oct. 1 on plans for cutting travel expense—tossing in a suggestion that more use be made of public transit vehicles.

NEW LAWS PERMIT 72,000 Lbs. GVW



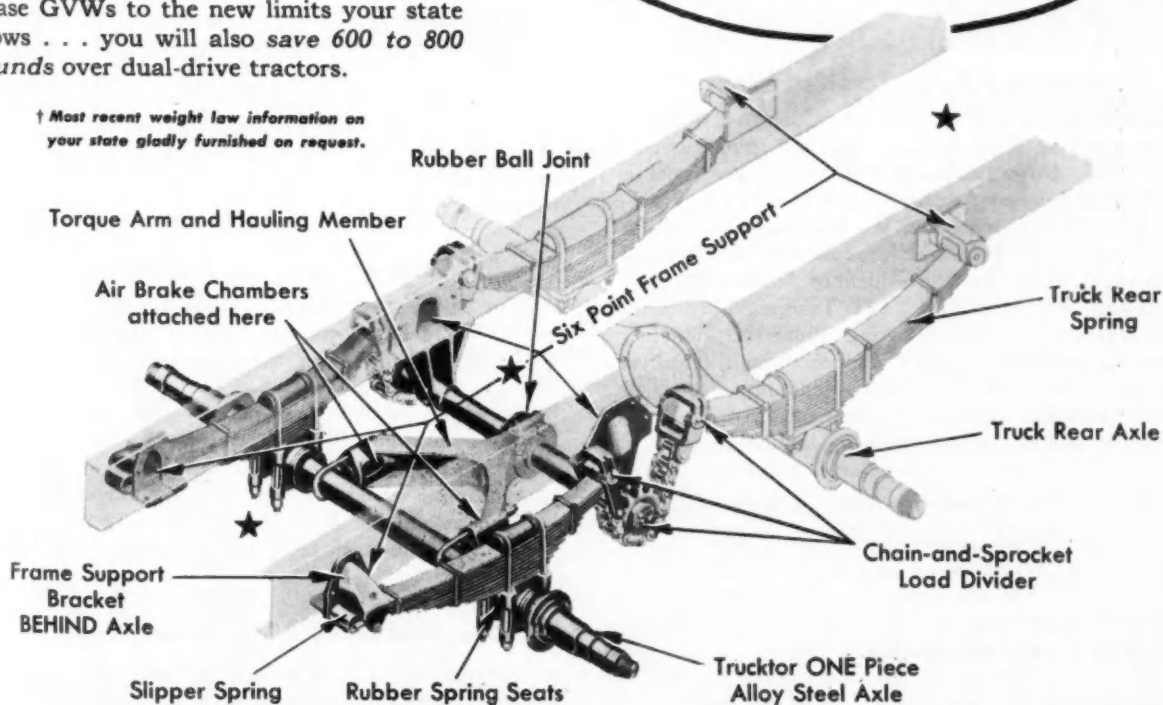
Model 4402 Federal Truck with Trucktor Model HLR Third Axle, 10:00 x 20 tires, mechanical air brakes.

**6-Wheel Tractor and Tandem
Semi-Trailer Combinations
Now Allowed up to 72,000 Lbs.
in Many States†**

Take advantage of increased allowances for these vehicles. Convert present 4-wheel tractors with *Trucktor* Third Axles . . . specify them on new tractors. With "Truck-Mated" *Trucktor* you will not only increase GVWs to the new limits your state allows . . . you will also save 600 to 800 pounds over dual-drive tractors.

Convert with
Trucktor
THIRD AXLES

† Most recent weight law information on your state gladly furnished on request.



★ CROSS MEMBERS LOCATED AT THESE POINTS

For further information, call your Truck Dealer, *Trucktor* Distributor, or write direct.

THE TRUCKTOR CORPORATION

Route 22

Mountainside, N. J.

DETROIT DISPATCH

by **LEN WESTRATE** Detroit News Editor

Trucks on Rails . . . Some Progress

Look for a lot of action on this combination truck-rail haul front in coming months. Briefly, here is the situation: GM's Electro-Motive Div. already has announced a 75 ft special low bed flat car designed to carry two 35 ft trailers. Pullman Standard also has one under development but has not yet announced it. A Chicago company, Rail Trailer Co., has ordered 500 cars and expects to buy 1500 more, plans to rent the cars to truckers and operate the terminals for the railroad. Both P-S and GM cars load from the side, require special loading facilities and marshalling yards at terminals. Other requirements are special rail schedules with fast freights, agreement with unions fearful of displacing over-the-road drivers. The latter point is reported to be in hand after talks with union officials. There is still much to be known about rates and similar problems. CCJ is researching the development and will have a complete report as soon as all details are available.

Coming Up . . . Trucking Week

November 16 to 22nd has been designated Truck Transportation Week to focus national recognition on the truck transport industry. Sponsor of the event is ACT (Independent Advisory Committee to the Trucking Industry). Co-chairmen are Walter F. Carey, ATA president, Roy Fruehauf, president of Fruehauf Trailer; B. M. Seymour, president of Associated Transport, Inc., and Dave Beck, AFL Teamsters president. All segments of the trucking industry, including drivers, operators, shippers, and equipment suppliers will be represented. ACT also is planning a series of dinner meetings across the nation next April to promote the interests of the trucking industry.

Automatic Transmissions . . . Spreading

Two more truck manufacturers are going to offer automatic transmissions on units up to $\frac{3}{4}$ -ton on their next models. The transmissions will be of the fully automatic type using a torque converter in conjunction with a planetary gear set.

Dimensions and Brakes . . . Up for Study

Representatives of truck manufacturers and trailer builders will form two committees to study specific problems relating to truck-trailer combinations. One committee, composed of three members from each group, will study coordination of physical dimensions of trucks and trailers, including bumper-to-back-of-cab dimen-

sions, fifth wheel locations, kingpin settings, and problems of overall length and width. Another committee will study braking systems for truck-trailer combinations. The project will involve brake connections, independent parking brakes on combinations, and similar problems.

Transmission Trends . . . Automatic

Thinking among truck engineers now is that the trend in automatic transmissions for trucks is toward a torque converter plus two gear steps in the lighter models up to $\frac{3}{4}$ of a ton. For heavier types the trend appears to be toward a 4-step gear type automatic with provision to hold the unit in any one pre-selected gear while descending grades.

1954 Engines . . . More Hp

The horsepower race in the passenger car field has its counterpart in the truck industry. Three of the largest producers will announce substantial increases in power for next year. One company coming soon with 1954 models will have a new engine with ratings increased considerably. Another will have a larger optional engine for 1954 and a third will have new engines in part of its line with considerably stepped up power.

White-Autocar . . . Stock Suit

Efforts of a stockholder to nullify the sale of Autocar to White have been blocked, but there still may be a little difficulty over the price to Autocar stockholders. A Federal court has turned down a stockholder's plea to set aside the sale but agreed that appraisers and auditors appointed by the court should determine the fair value of Autocar stock and that the protesting stockholder should be paid any difference between any higher appraisal and the \$12 per share par value White stock received in exchange for Autocar common.

Reo Announces . . . New Fuel Tanks

Development of two new fuel tanks as optional equipment has been announced by Reo Motors. Factory installation of single or dual step-type gasoline fuel tanks of 50-gal capacity is now available on all models of tractors. In addition a new 16-gal fuel tank has been designed which permits mounting of a skirted body on a regular truck chassis. When two step tanks are used, mounted on each side of the cab, the installation necessitates that the battery be moved.



International Harvester



One of the many leading engine manufacturers to select and distribute Perfect Circle's 2-in-1 chrome piston ring set for authorized replacement service



2-in-1 is the truly modern piston ring equipment, controls oil—seals compression for over twice as long as old style rings. Solid chrome protects both oil rails and top compression rings against wear. And only 2-in-1 offers a choice of spring pressures with each oil ring to meet any cylinder wear condition.

For sustained power and positive oil control for thousands of extra miles, always install Perfect Circle 2-in-1 chrome piston ring sets. Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.

Perfect Circle

PISTON RINGS The Standard of Comparison

OCTOBER ROUNDUP

by ERNIE FOREST Assistant Editor

ATA Convention . . . Leads the Parade

American Trucking Assns.'s annual convention, 26-30 this month in Los Angeles, Calif., leads the list of important meetings affecting the trucking industry scheduled for the near future.

A highlight of the meeting will be issuance of a special postage stamp commemorating the 50th anniversary of the trucking industry dating from the first commercial vehicle performance test held in New York City in 1903.

Speakers and discussion topics at the convention are summarized on page 67 of this issue in connection with a special article on the 1903 contest compiled from early automotive magazines.

National Safety Council . . . Safety Congress

Meanwhile, fleet safety men are getting ready for the Commercial Vehicle Section meetings at National Safety Council's annual Safety Congress, Oct. 19-23, at the LaSalle Hotel, Chicago.

First Commercial Vehicle Section meeting, on the 20th, will be a panel on driver hiring. Following the discussion, the section will divide into common carrier, private carrier, automobile transport, intercity bus and taxicab workshop groups. The same system will be followed after the afternoon's panel on driver training, supervising and counseling and the next morning's panel on accident reports, records and analysis.

Thursday morning will be a joint session with the Transit Section. Speakers include Dr. J. L. Rosenstein on "Human Engineering in Safety," and 1952 Marcus A. Dow award winner Carlton Alexander, whose story of fleet safety at McLean Trucking Co. appeared in *COMMERCIAL CAR JOURNAL* last month. Final feature will be presentation of the National Fleet Safety Contest awards.

Muffler Noise . . . Arouses Interest

Feature of the annual National Noise Abatement Symposium, Oct. 23-24, at the Armour Research Foundation of the Illinois Institute of Technology, will be a session on outdoor noise where Lewis Kibbee, American Trucking Assns., will speak on "We Can Reduce Truck Noise."

Latest areas clamping down on anti-noise violators with ineffective or defective mufflers include (1) Delaware—where a five-man committee has been appointed to study the problem and over 165 truck

drivers have been arrested in Wilmington, (2) Baltimore, Md.—where over 400 truck drivers have been picked up, (3) Los Angeles, Cal., where 50 arrests were made in the first 24-hr period in enforcing a new city ordinance, and (4) Columbus, Ohio.

SAE . . . Three Meetings

Three meetings of the Society of Automotive Engineers to be held at the Conrad Hilton Hotel, Chicago, open next month's calendar. They are: National Transportation Meeting, Nov. 2-4; National Diesel Engine Meeting, Nov. 3-4, and National Fuels and Lubricants Meeting, Nov. 4-6.

Topics of interest at the Transportation meeting include air suspension, muffler and exhaust noise, power steering, COE design for over-the-road use and truck electrical equipment.

Of interest to truck users at the Diesel Engine meeting is a discussion on factors affecting exhaust valve life. LP gas, what affects motor fuel octane requirements and causes of carburetor gumming are topics of most interest to fleetmen on the Fuels and Lubricants meeting program.

ATA Foundation . . . Growing

Third major contribution to the ATA Foundation, Inc., since its inception a few months ago is \$25,000 from Dayton Rubber Co., Dayton, Ohio. Set up by the American Trucking Assns., the Foundation offers a means for industry suppliers to help ATA's educational activities.

At the same time *Printer's Ink*, national weekly advertising and sales magazine, noted that the trucking industry plans a million dollar advertising budget for 1954.

Build a Trailer . . . of Plastic

Fiber glass and polyester resin plastic is making news in trailer construction. Following *COMMERCIAL CAR JOURNAL*'s report on Strick Co.'s plastic-lined reefer in the July issue, both Dorsey and Strick have announced addition of plastic features in standard model trailers, see page 88 this issue.

Other reports on use of plastic, scheduled for roundup in an early issue, include a 3400 gal tank trailer, 24 by 8 by 8 ft trailers for use in tractor and two semi-trailer combinations, and standard semi-trailers made of plastic impregnated with aluminum pigment.

(TURN TO PAGE 194, PLEASE)

NOW..LPG POWER

IN GREAT NEW MEDIUM-DUTY INTERNATIONAL TRUCKS!



New INTERNATIONAL RP-160 Series with LPG power. (Gasoline power also available.) GVW ratings, 14,000 to 17,000 lbs. 130, 142, 154, and 172-inch wheelbases. Single or dual heavy-steel pressure fuel tanks with 4 to 1 safety factor. Automatic safety relief valves on tanks and fuel lines vent vapors high above ground through large capacity stacks. Automatic excess flow valve shuts off fuel supply in case of fuel line breakage.

It's another first from INTERNATIONAL! The first medium-duty trucks with factory-installed LPG fuel systems to receive Underwriters' Laboratories listing.

With these new INTERNATIONAL RP-160 Series Trucks you can count on high compression power, greater engine efficiency, and longer engine life. Now all the advantages of the famous INTERNATIONAL Silver Diamond 240 engine are combined with the benefits of the LPG fuel system—

High compression ratio of 8.4 takes full advantage of the extra power in high octane LPG fuel.

Lower maintenance because LPG is a dry gas

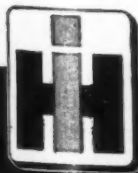
and will not wash down cylinder wall lubricants. Carbon deposits practically eliminated. Engine wear and cylinder erosion reduced. Oil less contaminated.

Latest safety features, including new submerged-type safety relief valve in each tank.

Along with smooth, high compression LPG power, you get the extra stamina and the extra driver comfort built into every INTERNATIONAL.

For full details about the new RP-160 Series, see your INTERNATIONAL Dealer or Branch—soon! Time payments arranged.

INTERNATIONAL HARVESTER COMPANY • CHICAGO



International Harvester Builds McCORMICK® Farm Equipment and FARMALL® Tractors... Motor Trucks... Industrial Power... Refrigerators and Freezers

Better roads mean a better America

INTERNATIONAL TRUCKS

"Standard of the Highway"



By Donald S. Buck
Traffic Safety Engineer, Department
of the Army, Washington, D. C.



Is SPEED the RE

DO WE really know what causes our accidents? The National Safety Council reports in *Accident Facts** that 35 per cent of the fatal accidents are caused by excessive speed, and 9 per cent by failure to keep to right of center line, and so on. But I wonder just how valid those facts may be. They are based on accident reports prepared by those who investigated the accident—State troopers or city police or our own investigators.

Suspecting that there may be some difference of opinion even among trained investigators as to what specifically causes an accident I decided to test my contention by staging an accident during a recent safety seminar. After setting up the "accident" as outlined at right, I asked the group of some 80 safety engineers, attorneys (claim adjusters) and police officers to decide who and what caused the accident. They were also instructed to indicate appropriate "corrective action."

Difference of Opinion

WHEN the reports were collected and analyzed, the wide difference of opinions among those trained investigators was painfully apparent. Table 1 (page 66) indicates "assignment of responsibility."

In other tests similar to this one some investigators even blamed the "dog" for the accident. Some blamed the dispatcher who permitted a vehicle to be driven by a driver whose

* "... few accidents are investigated carefully enough to determine exactly what the underlying causes were ... "

EDITOR'S NOTE: An old friend of CCJ readers, Don Buck returns with the first of two highly controversial but thought-provoking articles. The second, dealing with Courtesy, will appear soon. This one involves, in his own words, the following . . .

ACCIDENT THAT DIDN'T HAPPEN

Early on the morning of the "accident" I laid down two sets of skid marks from 18 mph on the street directly in front of the building in which the safety seminar would be held. I secured two "stooges" and rehearsed with them the roles they were to play in the simulated accident that was to interrupt my talk.

After the seminar was under way the sets were arranged. Five oil drums were to be pushed from the tailgate of one vehicle. Two headlamps were to be broken at the scene for realism, two previously damaged vehicles were towed into position on the skid marks, and jammed together as if in collision. A rubber hose vigorously applied to the fenders provided suitable evidence of fallen debris; and some water poured on the pavement under the vehicles provided the "radiator damage."

Two blocks away another vehicle and driver waited to dash by at the appointed minute to provide the screeching of brakes and blaring of horn for the opening act. The setting was completed with another stooge standing

license had expired; however, in the main, the assignment of "blame" was nicely divided between the leading driver, the following driver, and both drivers.

Table 2 reveals the "grounds" on which accident responsibility was based. The primary causes are tabulated.

Analysis of this table reveals that



ne REAL Villain?

Let's Recheck the Records . . .

It may all too often be the scapegoat for the real, underlying cause

on the curb, where later he would allege that he was chasing and gesticulating to his runaway dog.

Then it happened. First came the sound of a passing vehicle; then a frantic shout drowned out by the blast of a horn, the screech of brakes, a rumbling crash and the sound of breaking glass. My group became restless, smelling blood outside.

I stalled the group to permit the boys to get rid of the evidence—then suggested that since we were studying accident investigation, the group look over the scene and report back to class their interpretations. Now 80 pairs of eyes and ears were to get the same story.

The stories were convincing—and familiar. The leading driver stated that a man on the sidewalk suddenly dashed toward the street, threw his hands up and yelled. Thinking him to be a police official, the driver made an emergency stop—with no opportunity for a warning hand signal. He alleged that his speed when the brakes hit was under 20 mph. He insisted the accident was caused by "this other guy" following too closely. Interrogation revealed that his driver's license had expired four months earlier.

The other driver was heatedly disclaiming having caused the accident. He pointed out that his brakes were not up to par, but the shop supervisor had repeatedly ignored his report that they were deficient. The other driver gave him no warning. He said he was at least 25 feet behind the other vehicle and driving under 20 mph. He stated that he hit the brakes, then cut the wheels and blew the horn, but couldn't miss.

half) held the primary cause to be excessive speed — (remember those skidmarks were made from exactly 18 miles per hour!).

Do you wonder that I am skeptical of the national figures which elevate "speed" to the number one position of accident causes? Only one person listed "wrong techniques" as the primary cause—apparently no one else took note of the following driver's testimony that he hit the brakes, then cut his wheels—a futile gesture if the wheels were locked in a skid.

Remedial Action?

WHEN it is obvious that if we cannot agree on who and what causes our accidents, it will be equally impossible to agree on what remedial actions should be applied. This is reflected by tabulation of the recommended corrective actions. See table 3.

Now a close look at the corrective actions table indicates that: Nearly two-thirds of the investigators recommended no corrective action against one or the other driver!

Sixteen would suspend or revoke an already invalid driver's license!

Four would take action against a shop supervisor for defective brakes (TURN TO NEXT PAGE, PLEASE)

primary responsibility for the accident was divided among at least eight different "causes." Seven of the 80 investigators stated that the primary cause was the failure of the leading

driver to possess a valid driver's license! Five, despite perfect skidmarks of 18 ft, accepted the following driver's allegation that his brakes failed to hold! Thirty-eight (nearly

Is Speed the Real Villain?

Continued from Page 65

Table 1. Assignment of Responsibility for the Accident

Person Held Primarily Responsible	Number
Leading driver.....	23
Following driver.....	26
Both drivers.....	22
Pedestrian.....	5
Shop supervisor.....	4
Total.....	80

Table 2. Primary Causes of Single Accident

(as tabulated from 80 different accident reports on the same accident)

Indicated Cause	By Leading Driver	By Following Driver	By Other	Total
Excessive speed.....	10	28	—	38
Following too closely.....	0	23	—	23
Stopped too suddenly.....	7	—	—	7
Failed to signal.....	9	—	—	9
No valid license.....	7	—	—	7
Defective brakes.....	—	5	—	5
Wrong technique.....	—	1	—	1
Attention distracted.....	—	—	3	3
Other causes.....	—	—	9	9
Totals.....	33	57	12	102*

* Primary causes total 102 since 22 of the investigators blamed both drivers and indicated primary cause for each.

Table 3. Corrective Actions Recommended

Recommended Measures	For Leading Driver Only	For Following Driver Only	For Both Drivers	For Pedestrians	For Shop Supv.	Total
(No action).....	(31)	(18)	(2)	(76)	(76)	—
Suspend license.....	13*	10	16	—	—	39
Revoke license.....	3*	11	5	—	—	19
Reprimand or warn.....	4	17	11	4	4	40
Arrest and fine.....	0	2	0	1	—	3
Hold liable for damages.....	1	5	2	—	—	8
Added training.....	3	15	19	—	—	37
Re-examine.....	11	29	17	—	—	57
Improve inspection and repair.....	—	—	—	—	4	4
Totals.....	35	89	70	5	8	207

* His license was already invalid in that he had failed to renew it.

—despite the fact these brakes laid down 18 ft of perfect skidmarks!

Thirty-seven recommended training for one or both drivers, yet recommended punitive measures totaled 104!

Fifty-eight would temporarily or permanently keep one or both from driving, yet only 37 proposed driver improvement via training!

Fearful lest these findings were not indicative of accident investigators in general, the test has been repeated nine times in widely separated areas before audiences made up of legal minds, safety engineers, policemen, supervisors, statisticians and others with direct interest in accident investigations. I am unhappy to report that the lack of uniformity in

the investigators' findings becomes even more apparent with each successive test. An aggregate of 1150 persons have been exposed to various ramifications of this experiment and the number of divergent viewpoints is not far behind.

No significant pattern of viewpoint could be identified among the different professional segments, except that police generally seized upon violations of the traffic code, attorneys tended to measure the incident in terms of "last free chance," negligence," and "reasonable and normal responses," while safety engineers generally identified the unsafe act (legal or otherwise) that most directly led to the accident (whatever the reason). These experiments convince me that a new field of transportation science beckons: "The psychology of deportment for those involved in an accident." The tests definitely prove the crying need for a more uniform approach to accident investigation.

Is Speed to Blame?

GRAVE doubt is raised as to the reliability of the popular figures nationally attributed to speed being our number one excellent cause. I am inclined to doubt it. Rather I suspect that in too many cases "SPEED" is a handy crutch for use when investigator is unable to determine *WHAT* specific unsafe act occurred at any given speed so as to directly cause the accident. This then is my first axiom: *Available accident data is not reliable.* The hypothesis of speed as the number one accident cause is not yet proven.

I am not an advocate of higher speeds. But in any case, I do urge the use of "specifics" if improvement is desired. Speed is not the cause. Rather it is the environment in which the germs causing accidents thrive and develop. Admittedly excessive speed affords less time to make a proper decision in event of an emergency (just as traveling through an epidemic area reduces one's chances to ward off the contagious germs). Higher speeds make it much more difficult to stop quickly, veer sharply or give warnings (just as increased exposures in epidemic areas heighten the likelihood of contracting trouble). Any speed not commensurate with the average traffic flow,

(TURN TO PAGE 156, PLEASE)

COMMERCIAL CAR JOURNAL, October, 1953

Those at Los Angeles program of schedule of the events High point ing the issue industry will fleetmen wulation of "Federal R Industry panel disc Harvester General Fr Albert Veg son, Interst Tax Comm Director of of State; c

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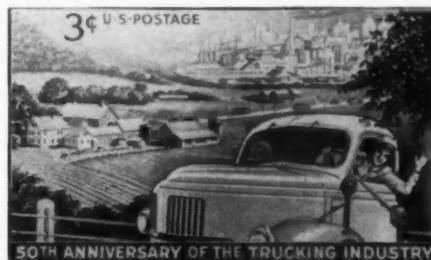
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ATA Convention Highlights

Those attending American Trucking Assn.'s annual convention in Los Angeles, Cal., later this month can look forward to an active program of business and social events. In addition to the regular schedule of committee and conference sessions, here are some of the events of particular interest.

High point on Tuesday will be the luncheon when ceremonies marking the issuing of the commemorative stamp honoring the trucking industry will be held. In the face of continuing restrictive legislation, fleetmen will also be interested in two discussions—the first on "Regulation of Truck Transportation by the States" and the second on "Federal Regulation of Truck Transportation."

Industry specialists and leaders included among the speakers and panel discussion leaders are: John L. McCaffrey, International Harvester Co. President; Dave Beck, Teamsters Union President; General Frank D. Merrill, New Hampshire Highway Commissioner; Albert Veglia, California Motor Vehicle Registrar; James K. Knudson, Interstate Commerce Commissioner; M. C. Connors, Oklahoma Tax Commission Secretary; George E. Kneipp, District of Columbia Director of Vehicles and Traffic; Earl T. Newberry, Oregon Secretary of State; and Otto F. Messner, Pennsylvania Secretary of Revenue.



For collectors, first day of issue of stamp will be Oct. 27 in Los Angeles

11 trucks took part in the nation's first commercial vehicle performance test in 1903. To honor this, a . . .

Special Stamp Marks Industry's 50th Year

TRUCKING celebrates its fiftieth anniversary this year. To mark the occasion, a special commemorative stamp will be issued by the Post Office Department in conjunction with the American Trucking Association's annual convention at Los Angeles (details above). First day of issue of the stamp will be October 27.

Although it was impossible to accurately determine when the first motor truck service began, a suitable birthdate for the industry was found in the date of the first official recognition of trucking as a separate part of the automobile industry. This took place on May 20 and 21, 1903, when 11 gasoline, steam and electric trucks took part in the first commercial vehicle contest sponsored by the Automobile Club of America in New York City. At that time it is estimated that there were fewer than 200 distinct trucks in the country, although there were also a number of motor-powered "delivery wagons."

From this early start the industry has grown to more than 9,000,000

Entries in the Commercial Vehicle Contest

No.	Class	Type	Maker	Motive Power	HP	Tare	Load
5	1	Delivery wagon	International Motor Car Co., Indianapolis	Electricity	8	2420	1210
10	1	Delivery wagon	Mobile Co. of America, New York	Steam	4½	1500	775
11	2	Open del. wagon	Knox Automobile Co., Springfield, Mass.	Gasoline	16	2300	1250
12	2	Cov'd del. wagon	Knox Automobile Co., Springfield, Mass.	Gasoline	8	2070	1245
14	2	Cov'd del. wagon	Blaisdell & Co., Brooklyn	Steam	10	3530	1720
2	3	Stake truck	Union Motor Truck Co., Philadelphia	Gasoline	20	5810	3240
3	3	Baggage express	Union Motor Truck Co., Philadelphia	Gasoline	16	4525	2710
9	4	Truck	Morgan Motor Co., Worcester, Mass.	Steam	20	11,160	5740
7	4	Truck	Columbia Engineering Works, Brooklyn, N. Y.	Steam	15	10,225	3805
1	5	Truck	T. Couthard & Co., London, England	Steam	20	14,225	10,000
6	5	Truck	Columbia Engineering Works, Brooklyn, N. Y.	Steam	35-40	14,500	10,000

vehicles and over 6,000,000 employees, with a key position in the nation's economy.

The Contest

STATED purpose of the contest was to show that trucks "can be used successfully in commerce at less cost and to greater advantage than pres-

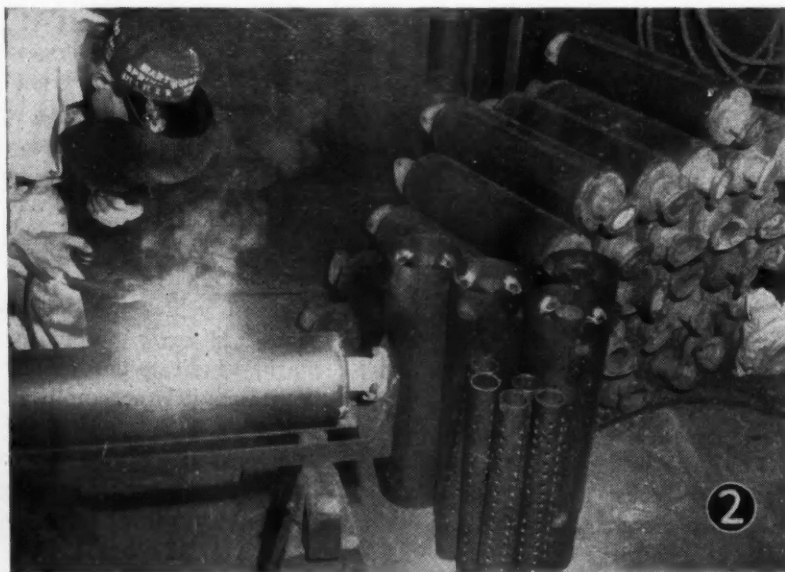
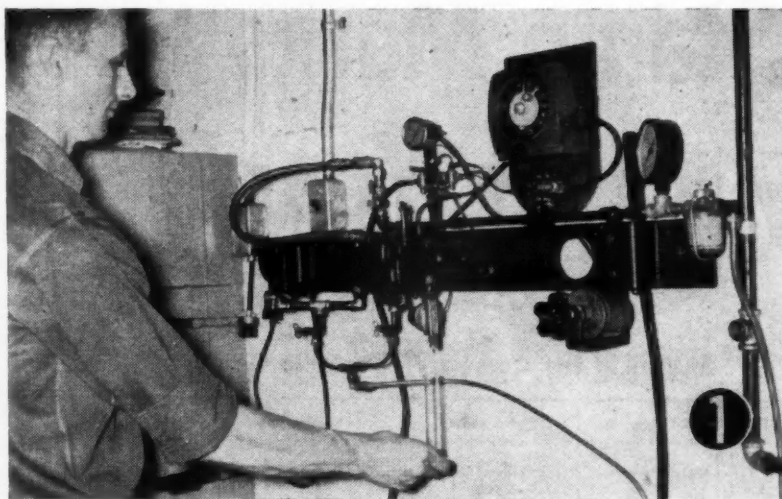
ent horse-drawn vehicles." Reports of the contest in early automotive trade magazines indicate that observers felt that it definitely accomplished its purpose.

The vehicles were grouped into five classes according to carrying capacity. From an entry list of 14,

(TURN TO PAGE 128, PLEASE)

A CAPITAL APPROACH To Better Shop Equipment

For better bus maintenance, this series of nine shop hints has been gathered right in the shop of one of the nation's top transit fleets



From material furnished
By James F. Kirk
Capital Transit Co.
Washington, D. C.

Fig. 1. Carburetor Tester

An accurate check of the carburetor is made on this carburetor tester. Every carburetor is put on this instrument after overhaul, and as a result reliance can be put on proper adjustments and economical vehicle operation. The tester provides for three distinct tests: 1. float level and needle valve wear, 2. vacuum operation and pump circuit discharge, 3. orifice jet flow rates.

Two different model carburetors can be tested on the device. Set up is as follows: An electric fuel pump is located off to the right. This pumps gasoline through the filter and into the flexible line which is attached to either carburetor to be tested. A special adapter in the form of a pipe with elbow and glass tube is screwed into the carburetor body at a drain opening. With fuel pumped

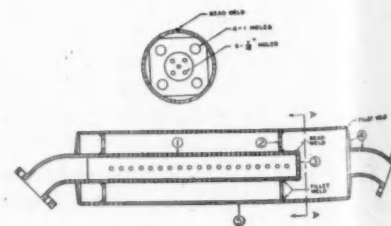


Fig. 2. Capital

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to the needle valve, it can be checked for possible leakage, while the fuel level, showing up in the glass tube can be noted on the gage which is graduated to show operating level. A drain located at this fitting permits draining away of the spent fuel back to the tank.

Next test is for vacuum operation of the pump circuit piston. A hand vacuum pump is connected through a vacuum gage to the vacuum line opening. A quick turn of the handle creates a vacuum similar to that developed by the engine so that the plunger is actuated and fuel is squirted through the main jet. Check is thus made for operation of the piston and for volume of fuel discharged by the vacuum piston operation.

Next check involves the testing of various jets used on bus carburetors. This involves the selection of the proper orifices for particular requirements. It has been found upon examination that new jets are not always accurately drilled and that variance in orifice size affected not only fuel consumption rates but bus performance as well. Result was this tester to match up jets with the apertures which gave best results in the fleet.

The tester for this uses the timer above, the relay which opens and closes the lines and the switch. Thus a jet is tested for fuel flow per given amount of time and those measuring up to our standards, are installed.

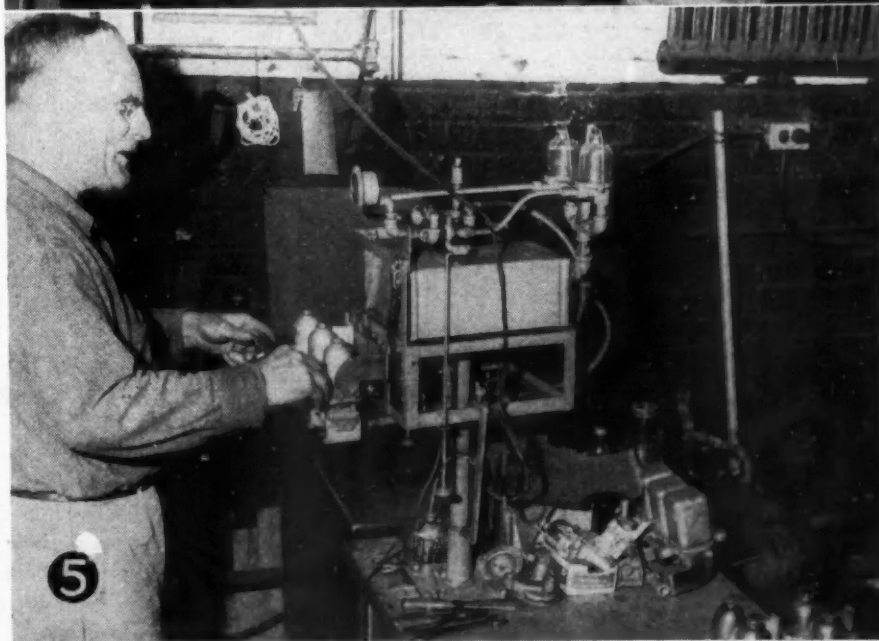
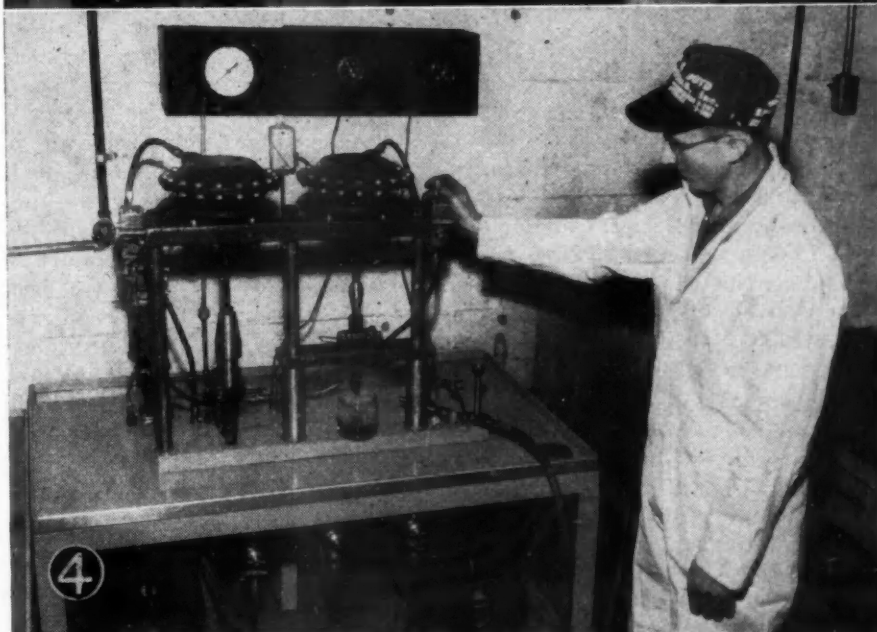
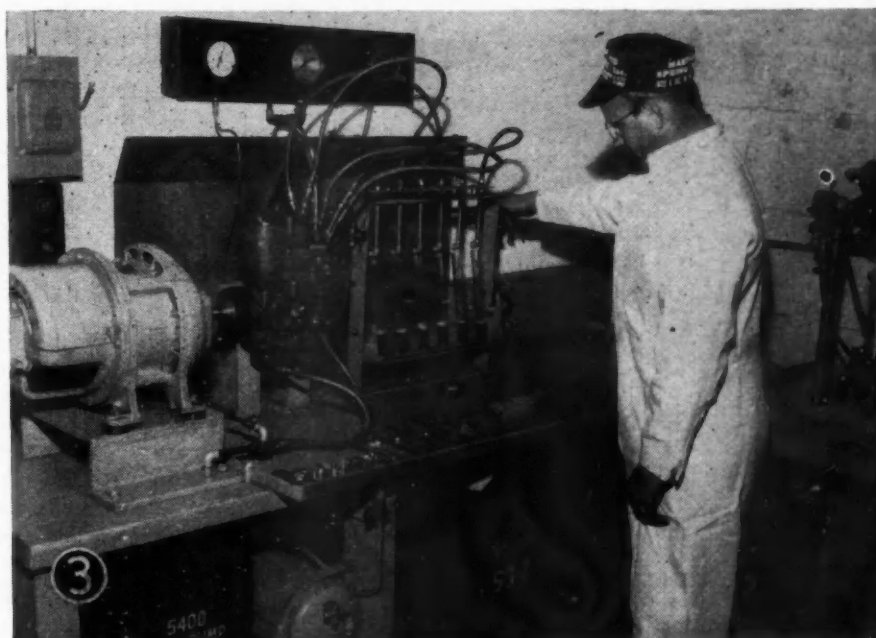
Jets are tested at (A) which is an opening fitted with fittings for various jet size and thread types. A graduate is held under the opening and fuel volume is measured for a given time as set on the timer.

Fig. 2. Shop-Built Muffler

Capital Transit Co. designs and builds its own mufflers, finds that shop-built units outlast the original mufflers and adequately control exhaust noise. This type muffler has been in use for a period of three years and is still serviceable. Original equipment sometimes gave way within six months.

The unit is constructed as shown in the drawing. Interior compartment is a 2 $\frac{5}{8}$ -in tube with $\frac{1}{8}$ -in. walls and having six rows of 5/16-in. holes drilled longitudinally as illustrated.

(TURN TO NEXT PAGE, PLEASE)



... Better Shop Equipment

Continued from Page 69

The muffler shell is 12-gage steel rolled to 7 in. ID. Ends and collar castings are salvaged from the original muffler. The baffle plate is cut from $\frac{1}{8}$ x 6 x 6-in. steel and is welded to the outer shell at the rear. Four 1-in. holes are drilled for the passage of gases. Front "baffle" is merely a support for the center tube.

A jig is used for easy and quick assembly. Note construction details. End fixtures support the collars so that a perfect alignment job is done.

In addition to longer muffler life this design is satisfactory from the standpoints of noise and back pressure. The unit meets Capital Transit specifications in both cases and appears to be the answer to the muffler problem.

Fig. 3. Diesel Fuel Pump Test Stand

This test stand accurately simulates operation of the fuel pump on a bus. There is a variable speed electric motor which drives the fuel pump. Calibrated lines run from the fuel pump distributor through calibrated nozzles into graduates. The pump is primed by air pressure being supplied to the fuel supply tank; after which, the pump itself picks up the fuel and furnishes it through the nozzles into the graduates.

Part of this stand includes three gages. The first indicates pressure exerted by the pump when running under normal conditions. The second gage indicates the maximum pressure built up when pump is operating as no fuel is allowed to go to the nozzles (This is quickly checked by turning a valve in the main supply line to "off" position.) The third gage indicates pump speed and also includes a revolution counter.

The capacity of the pump and its ability to deliver fuel equally over all facilities is checked by operating the pump at a specified pressure as observed on the first gage which should tally with the speed as observed on the third gage. When this has checked, the quantity of fuel flowing into each of the graduates is checked against a specific number of revolutions at a specific speed. Further, the difference between cylinders is checked by comparing the graduates with one another.

Below the test stand may be seen two containers marked "5400" Fuel Pump 537. These containers were built by Capital Transit Company for transporting fuel pumps from location to location without causing any damage to the pump. This is typical of a great many such containers for the shipment of a great many units including such things as nozzles, distributors, generators, alternators, rectifiers, etc.

Fig. 4. Diesel Nozzle, Check Valve Tester

This test stand was constructed by Capital Transit Co. for testing diesel nozzles and check-valves under conditions simulating those encountered in actual operation.

Air operated plungers operate the diesel nozzle plunger and by so doing, it is allowed to pick up and distribute fuel. Also, proper sealing of the nozzle tip is checked by applying pressure to the tip by means of an air brake chamber and attempting to reverse flow of fuel through the nozzle tips.

High pressure fluid is delivered by means of a high pressure lubrication pump especially adapted for this purpose by us. Check valves are checked by attaching them to the test stand base and attempting to supply fuel through the valve at a specified pressure. The operator is enabled to run his tests by means of gages properly plumbed-in.

Fig. 5. Fuel Pump Tester

Rebuilt electric fuel pumps are run in and checked on this specially designed tester. The unit consists of a frame upon which is mounted a gasoline supply tank, a pressure gage, fuel strainers, a bracket for mounting the pump and necessary lines and connecting fittings.

The overhauled fuel pump is clamped into position and connected to a battery located on the bench. Pressures are checked at the gage over a two hour period during which time any adjustments and repairs are made.

Fig. 6. Air Test Bench

The air brake test bench includes a somewhat standard board with shop air line supply pressure for checking valves. A bench-mounted HP valve trolley valve provides for actuation. The specially designed fixture permits quick slipping on of the various valves without bolting. Governor jig permits quick clamping of the governor body while air is applied and test is made of opening and closing pressure.

A variable speed electric motor powers the clutch centrifugal valve while operation is checked at each speed. Beneath the bench is a vacuum pump which is connected to the motor when tests are made on vacuum units.

The thermostat tester, right, consists of a heating gas element, fixtures for installing the thermostats and lines to the shop air line. Gages connected into the lines show water temperature required to open thermostat.

Fig. 7. Axle Rebuilding Stand

This axle rebuilding stand, made up from odd parts reduces substantially the need for lifting of the front axle while fitting king pins and bushings, aligning spindles, and similar repair work. Being adjustable so that the axle may rest in any position on a 180-deg. arc, the stand makes possible easy access to the axle and thus saves time for the mechanic.

The stand consists of a swinging axle support mounted on legs and provided with wheels for easy maneuvering about the shop. The carriage, or the swinging support, is a heavy iron base to which is welded longitudinally two sections of angle iron. The vertical sides of the angle irons are drilled and tapped to take a winged adjusting screw which holds the axle in position while moving it.

The hinge feature is accomplished by bolting heavy slack adjusters to the lower base and welding old cam to the upper carriage as shown in the diagram. Thus moving of the adjusting mechanism with a speed wrench causes the carriage with the axle to travel over 180-deg. arc coming to rest if desired in the upside down position.

The base is a steel plate similar to that of the carriage. To this is welded four legs made from 40-in. sections of heavy angle iron. Spread of the legs will be determined by the weight of the axle which will be used in the carriage. Four inch wheels are mounted on the legs for easy movement.

Fig. 8. Radiator Test Tank

This radiator test tank was made up from old parts. The tank consists of a steel box reinforced with angle iron. The top and bottom are welded to a feature of built tank is a hydraulic operating device so has to lift a a hydraulic reservoir, a gram shows parts.

The tank top and bottom elevating platform. A hand and the piston tank's bottom are located in operation and

Upon raising foot valve to Elevating tank the radiator to submerge and the weight saves many of heavy bu

Fig. 8. Radiator Test Tank

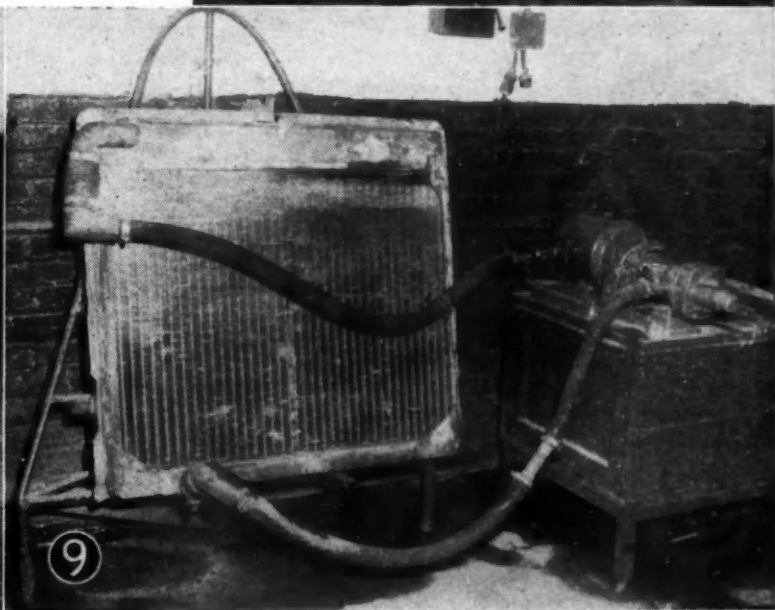
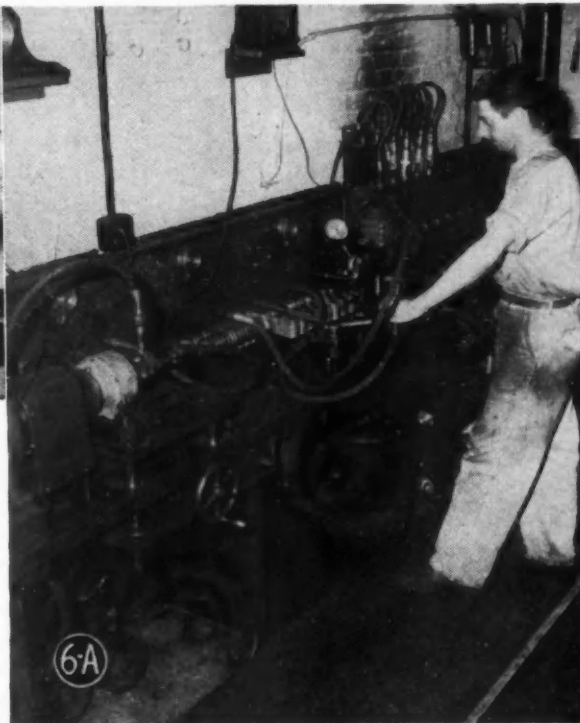
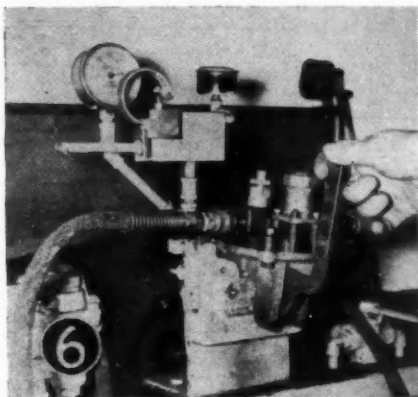
This radiator test tank was made from old parts salvaged from old buses. The tank consists of a sheet steel box reinforced at the top and bottom with angle iron which is welded to the sheet.

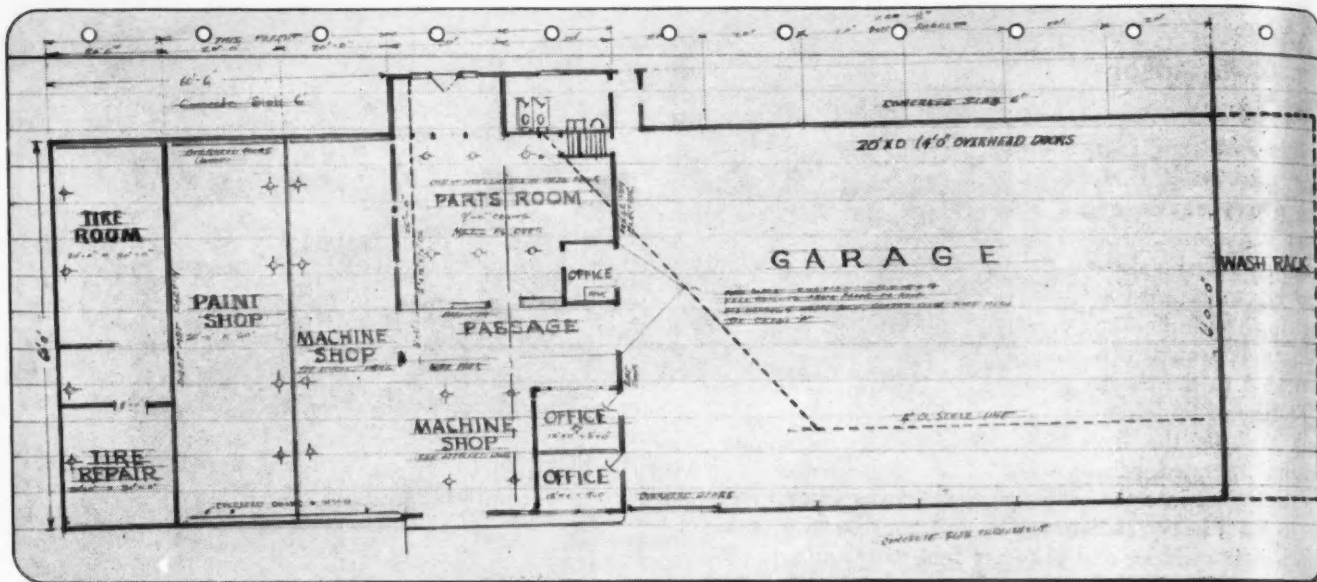
Feature of this shop-built tank is the hydraulic operated raising device set into the center so that the inspector never has to lift a heavy radiator. The unit consists of a tank, a hydraulic cylinder and piston, a foot valve, oil and air reservoir, a hand valve and connecting piping. The diagram shows a schematic view of the arrangement of these parts.

The tank is made from sheet steel reinforced at the top and bottom and at the corners with angle iron. The elevating platform is a plate welded to the top of the piston. A hydraulic cylinder is located below the tank, and the piston rod protrudes through the center of the tank's bottom. The air tank, hand valve and foot valve are located under the tank, placed readily accessible for operation and service.

Upon raising the radiator, oil is admitted through the foot valve to the cylinder under shop air line pressure. Elevating table can be held at any level or turned while the radiator is being filled with air. When it is desired to submerge the radiator, the air pressure is released and the weight of the radiator carries it down. The tester saves many hours of back breaking labor during a check of heavy bus radiator.

(TURN TO PAGE 160, PLEASE)





Floor plan shows arrangement of complete facilities at Asbury Transportation System's new shop in Los Angeles. Design feature of the building is use of overhead doors in place of walls, giving more light, better ventilation

Modern Fleet Shop Designed for Eff

California climate, minimum of fixed walls, plenty of overhead doors help

THE West's most versatile carrier—that's the slogan of the Asbury Transportation System with headquarters in Los Angeles. Asbury operates more than five hundred vehicles through the states of Oregon, Idaho, Utah, Nevada, Wyoming, Montana and California. Equipment ranges from the huge dromedary type truck-full trailers for general commodity hauling, to oil tankers and specially designed oil field equipment which after transporting the rigging, actually assists in its installation. If it's permissible to carry it, we'll move it—that's a promise of Asbury.

To maintain some 400 pieces of equipment normally operating in and around L.A., the company has just opened a new, modern shop complete with facilities from A to Z maintenance. This 80 by 220 ft building, together with a 60 by 240 ft terminal adjoining cost some \$500,000. As it was money well spent, it was also

facilities well utilized, for maintenance and inspection at Asbury now is as streamlined and smooth as good planning can make it. Here are some of the modern ideas incorporated into this installation.

Simplicity of construction was the theme of the structure. The building is a long, narrow design with an open air steam cleaning and wash rack comprising the entire end. The main shop consists of six double maintenance stalls without partitions of any kind. Then comes the offices and parts room, the engine rebuilding area, the body shop and the tire repair and storage area (see drawing).

Of simple, low-roof, single-gable construction, the shop has only four complete partitions made up of corrugated steel fabrication. The entire sides of the maintenance section, body and tire room consists of overhead doors. And of course (in sunny California) doors are somewhat su-

perfluous. So the result is an open-air shop, well-lighted, well-ventilated and providing pleasant working conditions for 35 mechanics, 4 lube men, 2 washers, 6 supervising personnel.

Cleaning and Washing Area

ONE end of the shop with projecting roof provides facilities for steam cleaning and washing. Trucks are driven through this lane after each trip, where bodies are washed down and undercarriages are steam cleaned. Engines and large components are carried to this spot with a fork truck for steam cleaning prior to overhaul. The heating unit is housed in a separate building nearby, and steam is piped underground to the rack.

Maintenance Area

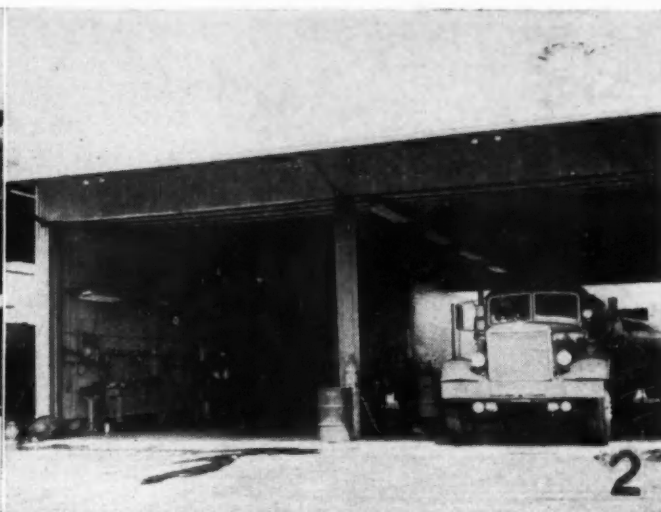
ALL general maintenance is performed in six straight-through (TURN TO NEXT PAGE, PLEASE)

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2. General
3. Inspection

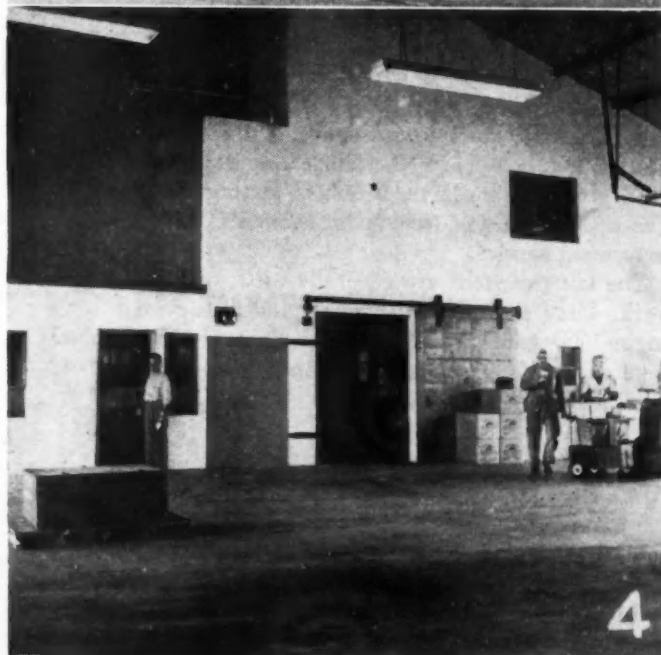
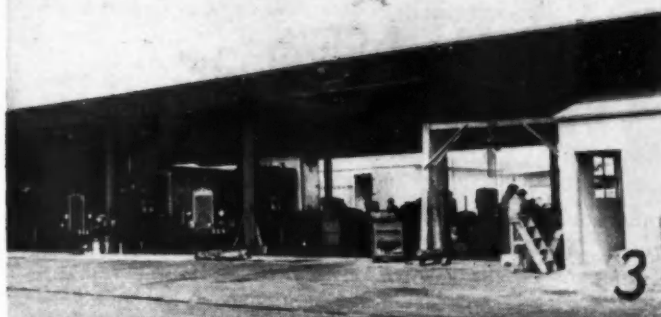
stream

4. Super
5. Body
6. Tire

COMMERCIAL



1. Open air steam cleaning area is built on end of shop
2. General maintenance area has straight through drive
3. Inspection and engine replacement area is wide open



4. Superintendent's office is at left, parts at right
5. Body rebuilding area is just to rear of engine room
6. Tire repair section has storage room directly to rear



head doors
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for Efficiency

ors help

streamline maintenance

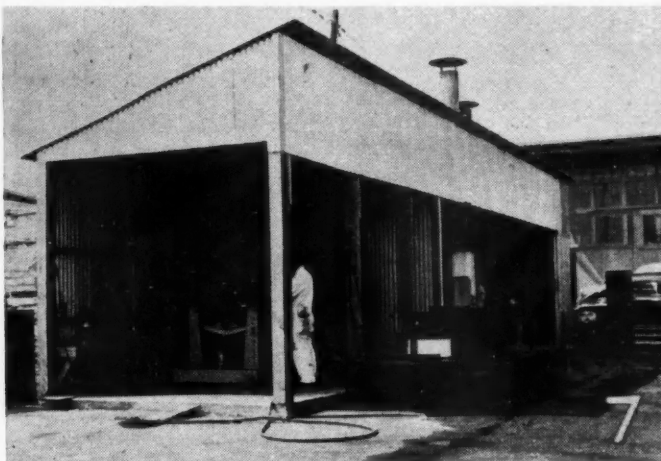
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October, 1953

COMMERCIAL CAR JOURNAL, October, 1953



Modern Fleet Shop . . .

Continued from Page 72

stalls comprising an area 60 by 120 ft. First section houses facilities and tools for brake, wheel, and heavy component assembly work. First two stalls are used for inspection and general engine work. Next set of stalls may be used for lubrication, inspection, tune-up, etc. Trend in this shop is to make all areas quickly available for any type service. For example, all lubricating equipment is portable—is stored in areas between stalls and can be moved quickly and conveniently when required. Thus, a man may carry the lubricating equipment to any stall, grease it while the truck is getting other service. The same is true of tune-up instruments. Result is fast, convenient service.

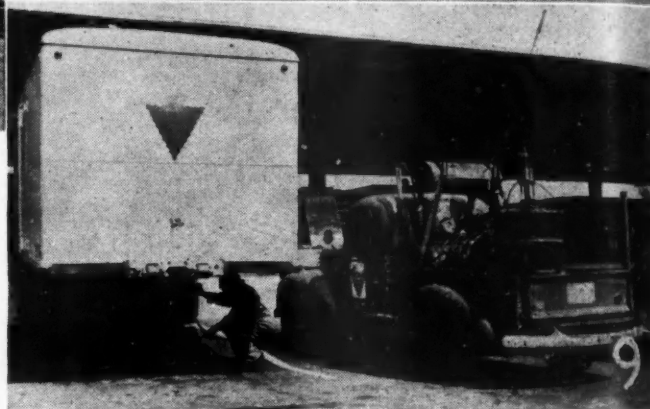
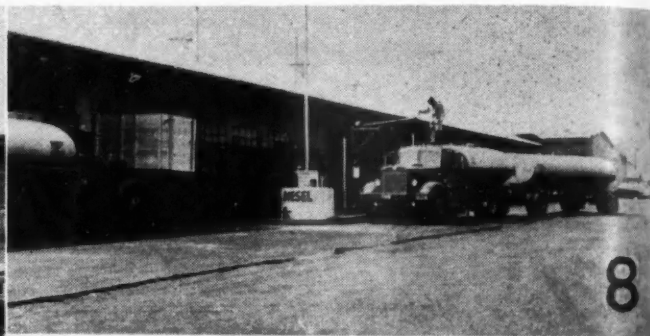
The last two stalls are generally used for heavy engine work. Here engines are removed and transported to the engine overhaul area for complete overhaul. Replacement engines are installed, and other components are serviced simultaneously.

Office and Parts Room

NEXT section of the building is the office space and the parts room. The engine rebuild area is housed just behind this. This area is about the only section completely enclosed. Layout has provided a clear view for the maintenance superintendent of the maintenance area. Parts room is adjacent the engine work, and tool crib is handy to all departments.

Body Rebuilding Area

FACILITIES for all body work are housed in another straight-through area immediately behind the engine rebuild area. During nice weather, however, work is performed on the outside. The area is arranged so that at least one vehicle can be worked on at a time inside. Painting, at the present moment, is done in the open behind the shop. Here the area is large enough and the air is warm and clear enough to make satisfactory paint jobs possible without special housing facilities.



7. Engine dynamometer shed is just off maintenance area
8. Refueling area location is outside, opposite terminal
9. Mobile lube equipment is used for servicing trailers

Tire Repair and Storage

TIRE inspection, repair and mounting is done at the end section of the shop. One side, as noted, is devoted to housing the spreader, the tube testing tank, the inflating guard and tools for mounting and dismounting. The enclosed area behind this is used for storage of casings and tubes.

The Dynamometer Shed

ENGINES are run in on an engine dynamometer housed in this shed which is located just opposite the shop maintenance section. This again is open on two sides, which materially reduces problems of lighting and ventilation. Engines are carried to the dynamometer with a fork lift truck modified for the work. Beyond this section is housing for the steam cleaning power plant.

The Refueling Island

REFUELING is done at the side of the shop facing the docks. Water, oil, gasoline and diesel fuel are readily available, being piped from underground storage tanks. Fire hazards are held at a minimum, and considerable time is saved with this arrangement.

Lubrication of Trailers

SO AS not to hold trailers up unnecessarily, a pick-up truck carrying all lubrication equipment necessary drives to the dock, and the lube man pulls a quickie while the cargo is being loaded or unloaded. Complete trailer inspections are given at this time. Result is no loss of time whatever, and the equipment is ready to roll as soon as loaded.

Three-axle
model has

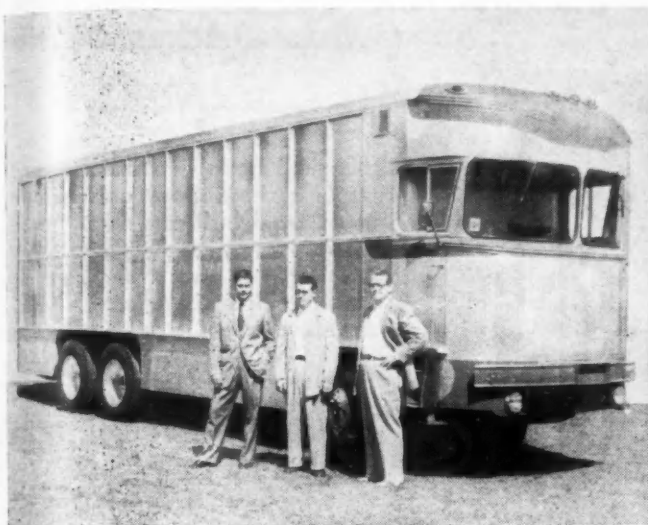
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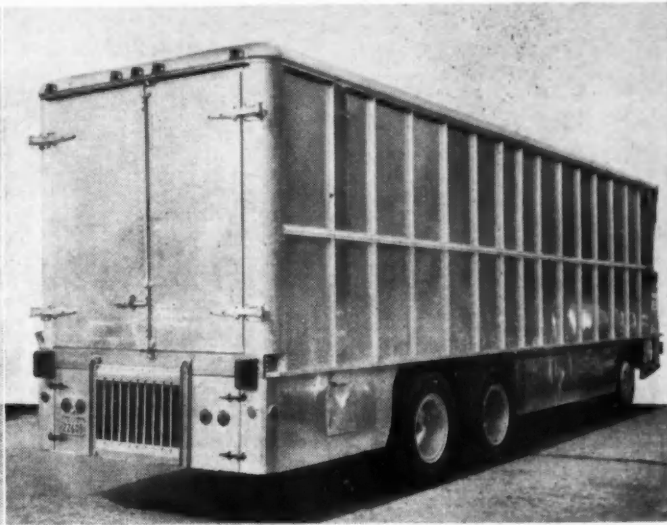
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Three-axle model is rated at 42,000 lb GVW. Four-axle model has power steering, is designed for 59,000 lb GVW



Engine, accessible for service through doors at side and floor panel, transmission and radiator drop out as a unit

Powered-Van Uses White Engine

**Available with two, three or four axles, all
component parts are suspended from van's floor**

V NOW in pilot model testing stages, a new highway van with modern lines has recently been developed by McBright, Inc., Lehigh, Pa. Vehicle is original in that there is no chassis. All component parts are suspended from the floor of the truck including the motor. There will be three models put into production which may be 33 or 35 ft long. The first will be with single axle front and rear for light hauling. The second has single axle in front and tandem rear axle for general highway use, and the third has tandem axle front and rear for extra heavy loads.

Making extensive use of aluminum, the three-axle model has an overall weight of 14,000 lb unloaded, a gross weight of 42,000 lb for registration purposes distributed with 10,500 lb on the front axle, 31,500 on the rear axle, although it is stressed to carry much greater loads.

The four-axle unit will be able to load 23,000 lb on the front two axles and 36,000 lb on the rear tandem or a total GVW of 59,000 lb. It will be equipped with Bendix-Westinghouse power steering. All other component parts will be the same as in the three-axle unit.

The 145 hp White Mustang engine is mounted vertically behind the tandem rear axle, supplies power through a White transmission to the second, single-speed driving axle. The driving axle and the dead rear

axle are Timken standard production units. The unit also uses a White front axle, Neway suspension, Ross steering and a Bendix-Westinghouse air brakes, clutch, and accelerator.

Location of the engine at the rear of the unit is designed for accessibility and easy servicing. A door is provided at either side for routine engine servicing. There is also a panel in the floor at the rear for more complete servicing.

Engine Change

THE engine, transmission and radiator can be dropped out as a unit in a matter of minutes. They are fastened with a few bolts and a few connectors which make it pos-

sible to complete an engine change in less than four hours.

Overall dimensions of the vehicle are: length 32 ft 11 in.; width 8 ft; height 11 ft. It has a 28 ft 11 in. cargo space with a flat floor and 7½ ft by 32 in. air conditioned, sponge rubber padded sleeper bunk.

Other features of the new unit include: control on brake system to shift braking ratios from front to rear wheels in bad weather to counteract skidding; spare tire mounted under cab and attached to cable hoist so that it may easily be pulled into position; aluminum wheels; hydraulically operated seat for driver and co-driver; driver's seat mounted six feet above road for greater visibility.

Shop Hints

Here are some swell time savers for fleet shops.

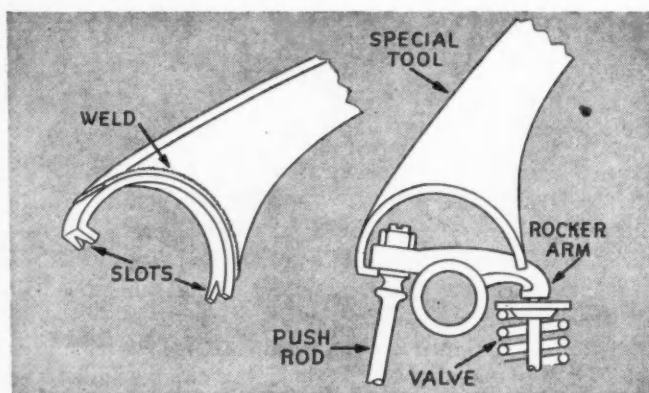
Let us have your ideas for new tools or short cuts

to service. We'll pay \$10 and \$25 for good ones.

\$25

To Remove Ford Push Rods

By Louis L. Repko
Ford Motor Co.
Detroit



Quick removal, repair and replacement of push rods and hydraulic tappets on Ford 6-cyl engines can be accomplished with this tool developed in our engine repair section. The tool is made of a curved steel strip having slots at both ends to which has been welded a handle to provide leverage.

By engaging the forward slot of the tool under the rocker arm and placing the rear slot atop the rocker arm above the valve, as illustrated, the push rod can be freed for easy removal by pushing down on the handle. The hydraulic tappet can then also be easily removed for easy servicing.

Cup Catches Cuttings When Co

By Roy Johnson
Consolidated Freightway
Portland, Ore.

This shop-made cup catches and prevents cuttings from going down into the crankshaft and into the oil holes on Cummins or other wet-sleeve engines when the block is counter-bored. Take the upper half of an old cylinder liner and weld a

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Clutch Tester Is Made from Pla

Capital Transit Co.
Washington, D. C.

A relatively simple device for testing pressures of heavy duty clutch assemblies can be made from an old platform scale as shown in the photograph. All you need is a bracket which is bolted to the sides of the scale and provided with a pressure adjustment such as the illustrated threaded screw assembly. A hand wheel provides for quick and easy application of pressure.

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Made in Shop, Trailer Jack Ha

By W. J. Thompson
The Carnation Co.
Los Angeles, Cal.

This handy trailer jack consists of four pieces welded together as illustrated. A short length of I-beam is welded to the top of a 10-ton screw jack; a tripod made from 8-in. dia. well casing is welded to the bottom of the jack; and a round piece of sheet steel is welded to the bottom of the tripod. Easy maneuverability

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Pipe Protects Rear Light in

By Miss Carolina Klein
Kleins Dairy Products
Cullman, Ala.

We take a piece of pipe from three to four inches long which is slightly larger in diameter than our rear stop light and weld it to the

body are
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Reversing Spring Bolt Makes

By R. H. Nuhn
Elyria, Ohio

In replacing rear springs in International LF-170 and LF-190 tandems, it is impossible to remove the 7/8-in. bolts that hold the top pad on without a great deal of dismantling

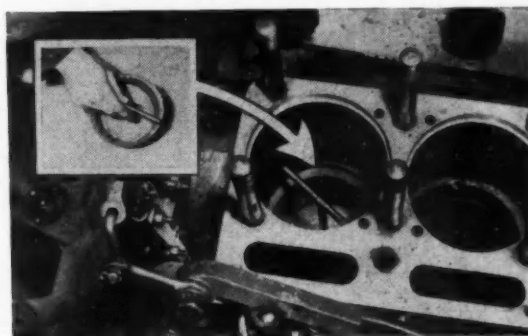
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Cutting When Counter-Boring

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bottom on it. Weld a T-handle to the bottom on the inside to make the cup easy to install and remove. Before placing cup into cylinder block, a sleeve rubber is fitted around it. This gadget is saving us many man-hours.

\$10

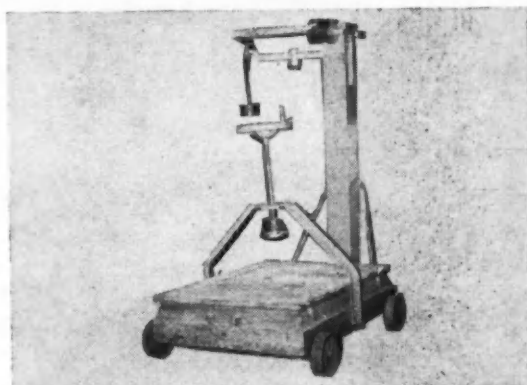


Is Made from Platform Scale

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In operation, first set the weights on the scale's balance arm at the number of pounds pressure wanted on the clutch. Then place the clutch assembly on the platform and apply pressure to the clutch pressure plate through the adjusting screw until the clutch travel conforms to pre-determined specifications. At this point, if the clutch is adjusted properly, the balance arm on the scale will lift.

\$10



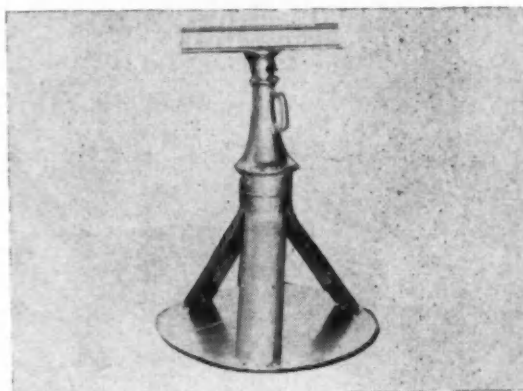
, Trailer Jack Has Tripod Base

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over the shop floor is provided when a tow chain is connected to an eye bolt secured to one leg.

Unique feature of this jack is the way we fashioned the legs. The pipe was slit for a distance of 18 in. and the sections spread as shown. This makes a lightweight, sturdy support for trailer work.

\$10



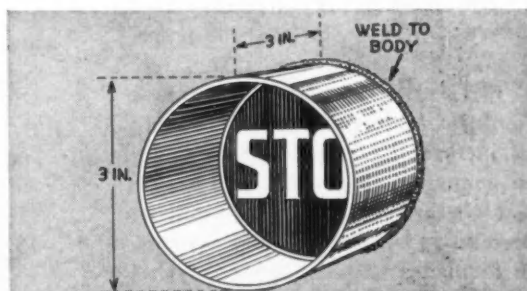
cts Rear Light in Backing-Up

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body around the light. This protects the rear light when backing up to platforms for loading and has practically eliminated broken rear lights.

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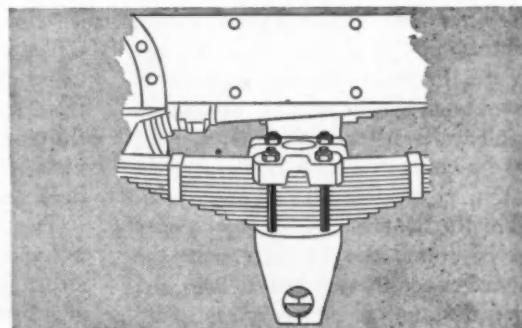


ing Bolts Makes Removing Easier

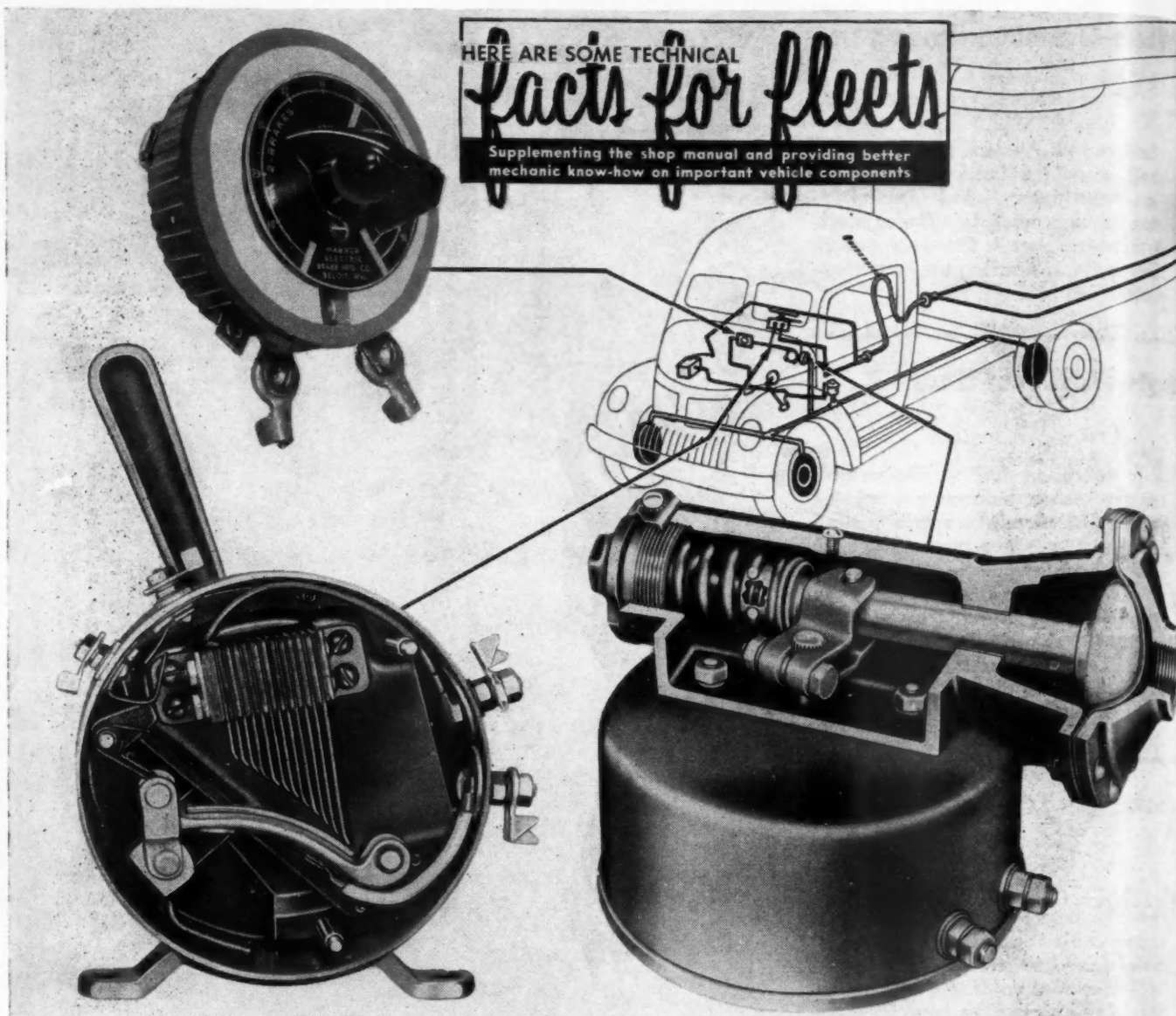
gs in Inter-
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as they must come out through the top. We find it is cheaper to cut off the bolts and replace them with new bolts inserted from below, as illustrated.

\$10



October, 1953



THE Warner electric brake, prominent for many years, is becoming increasingly popular with modern commercial vehicles, where efficient operation, precise synchronization and independent brake systems are requisites to safe stopping. Designed for installation on trailers and semi-trailers of all types and sizes, this brake can be synchronized with tractors equipped with air or hydraulic brakes. Electric brakes can be obtained as optional equipment on all trailers, or existing equipment can be converted at a relatively low cost.

For the benefit of readers who may not be completely familiar with the operation of this type brake, here is a brief description of operating prin-

ciples. This is a mechanical brake, using current from the vehicle's electrical system for actuation. There are three basic parts: the controlling devices, the magnet and armature, the brake shoe and drum.

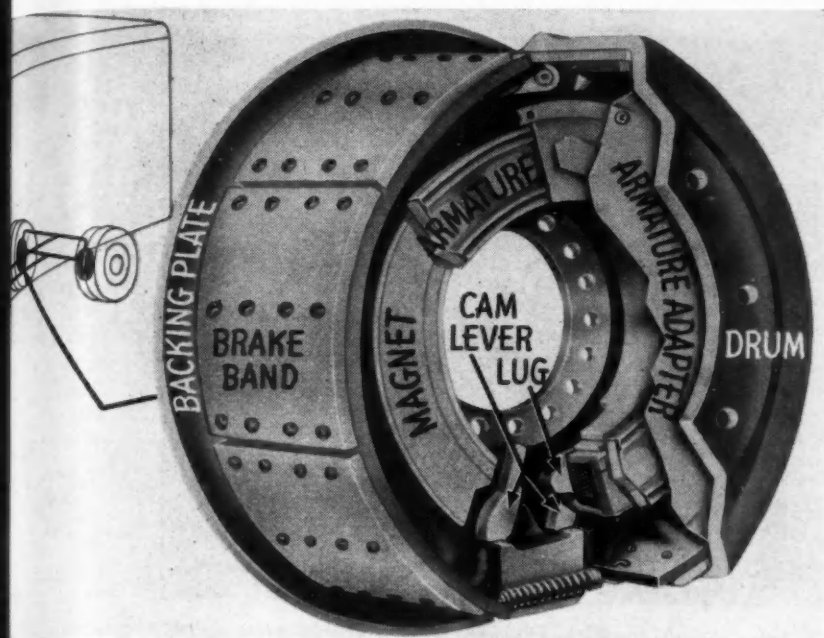
The controlling device consists of a hand controller, mounted on the steering wheel posts; an air-electric or a hydraulic-electric foot controller,

for actuation by the tractor brake foot pedal; and a load control, mounted on the dash for adjustment to load and road conditions.

The controller (1) is a simple rheostat with which the driver can apply any degree of braking power. As the lever is moved across the resistance, the current is varied to the magnet at the foundation brake. In

The Warner Elec

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Schematic diagram of truck-trailer showing location of major units required for electric brakes. Inset photos show, left to right: load control, hand controller, air-electric foot controller, and the brake shoe and drum

Actuated by energizing a magnet and armature, it can be adjusted to both weight of load and condition of highway, as well as synchronized with air or hydraulic brakes

Electric Brake

this way the driver has at his fingertips complete control of the braking force applied to the trailer wheels.

The load control, however, makes possible the adjustment of the full output of the brake to the load conditions. By adjusting the control knob (2) to the point where the wheels will just start to skid with a particular load, the driver is able to

apply full brakes at their most efficient point without regard for the positioning of the hand or foot controller. As the load is lightened, or when additional weights are added, the driver simply resets the control as required. The load control is of particular value in adjusting brake power on wet or icy pavement.

Two types of foot controllers are

available: one for hydraulic brake equipped tractors and one (3) for air braked tractors. This unit uses the same type rheostat found in the hand controller, difference being that this unit is connected to either the master cylinder line or the air line so that it is actuated by the foot pedal. The controller is adjustable so that the trailer brakes may be positively synchronized with the tractor brakes. The electric brake is a simple mechanical brake utilizing an electromagnet and armature (4) for shoe-applying force. The magnet is mounted in the brake assembly and is free to rotate a limited number of degrees on its pilot. The poles of the magnet press against the armature, depressing it slightly against armature springs. The armature is mounted in the brake drum and turns with the wheel.

Self-Energizing

WHEN current flows through the magnet, the magnet tends to cling to the turning armature, with the result that the magnet turns on its pilot. As it turns, the lug on back of the magnet moves against the brake cam, which forces the brake shoe into brake drum. From this point in brake operation, the brake is self-energizing in its application.

The greater the amount of current supplied to magnet, the harder the brakes are applied. When the brake is released, by cutting off current, the magnet loses its attraction for armature, the lug releases the cam, the cam releases shoe, and the shoe return springs pull the shoes back to released position. Because of the speed and controllability of electricity brake actuation and release are instantaneous and in the degree of power needed.

No adjustment of shoe-drum clearance is required throughout the useful life of lining, since the magnet trend will allow actuation of shoes down to rivet heads holding the lining. At this point, the magnet comes against an automatic stop, preventing the rivet heads from scoring the brake drum.

The trailer brake circuit consists of a single electric cable to each wheel. Each brake draws approximately the same amperage as a stoplight. Current is taken from live terminal on starter switch; ground is made at battery.

(TURN TO PAGE 132, PLEASE)



Detergent mix, fed through fountain brushes, washes trucks after initial spray and is rinsed off by second 17-nozzle spray rack. Horse blanket on first spray rack wipes scum off roof. Note 3-D effect of loaf of bread

Bakery Writes Recipe for Hig

It stirred-up a shop-made washrack that increased production from

AT ITS unpretentious Montreal garage, Wonder Bakeries Limited (a division of Consolidated Bakeries of Canada Ltd.) services the major portion of what probably represents the largest bakery fleet in Canada. Of Wonder Bakeries' more than 400 units, at least 275 of these—among them ½ and 1-ton door-to-door delivery trucks, 12 large vans and 3 tractor trailers—are maintained in Montreal under the sharp eye of Fleet Superintendent Hugh G. Brown.

While awaiting a badly-sought expansion to the existing quarters, the fleet superintendent and his shop foreman, J. Baxter, have introduced a series of innovations that have had a "stretching" influence on the cramped quarters.

By Michael M. Gutwillig

A case in point is the washrack designed by Hugh Brown and built entirely at the Wonder Bakeries' St. Urbian Street garage. This proved an amazing labor- and time-saving device. Previously it took one man a full 8-hour shift to turn out eight or 10 trucks a night. They were lucky to get 20 trucks washed on a shift. What was worse, there was no specified place to do the washing.

Today, however, three men turn out 200 trucks on an 8-hour night shift, and most Wonder Bread trucks are now washed every night. As each unit checks in at the garage in the

evening to gas up, it automatically passes through the washstand. There's never any hold up in the processing.

Scrap pipe and other easy-to-come-by materials were used in the construction. Figuring labor and everything, the cost probably reached \$250. Yet the unique stand has caught the imagination of a host of major properties in the Montreal area.

The operation involves passing a truck through two racks for a double rinse. Each rack sprays water from about 17 nozzle outlets. A mixer on the wall blends the soap detergent with water and this mixture is then pressure-fed by a motor through to the manually-operated fountain-head brushes.

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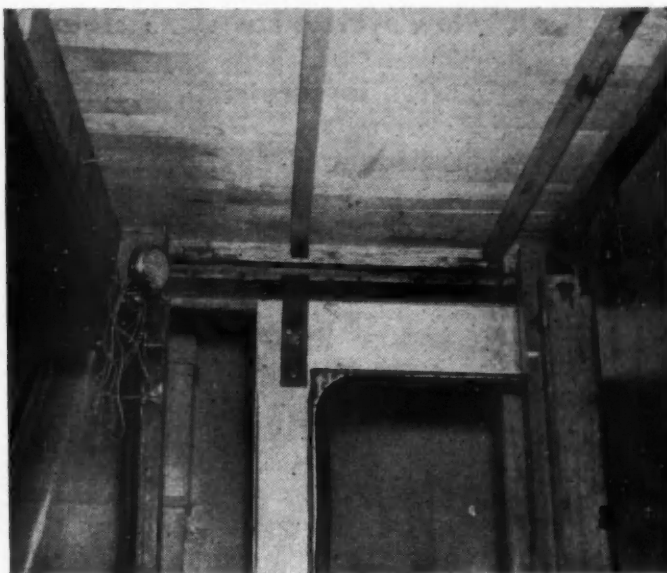
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Carpenter section fits multi-stop delivery trucks with angle iron slides to speed loading through use of fiber-board trays, cutting loading time from 45 to 5 min



Frost-stuck ball bearings made doors difficult to open, so shop modified doors to hang on simple steel channel. With once-a-month greasing, doors now operate in coldest weather

for Higher Shop Output



Hugh G. Brown, fleet superintendent, Wonder Bakeries Montreal, Canada

from 20 to 200 trucks in an eight-hour shift

Shop where 3-D bread is put on keeps two spray booths busy. High-capacity exhaust system permits spray painting in booth without mask

Two men man the brushes while a third examines for and touches up spots that require extra attention. Actually, speeds of up to a truck per minute can be attained under this arrangement.

The initial spray is especially helpful during the cold Winter months. It has the effect of taking the frost out in zero weather. Otherwise it would be difficult to remove the ice. To remove the scum from the truck roof, an old horse blanket has been applied at the first or entry end of the rack. The second rack rinses off the soap.

The company would have been reluctant to buy a costly unit at this time. However, experience with this improvised rack may well sell top management on the merits of a custom-made wash stand when facilities are expanded.

Body Rebuilding

WONDER Bakeries either builds or modifies many of its truck bodies to its own specifications in this garage. Delivery trucks, for instance, are fitted up in the car-

(TURN TO PAGE 136, PLEASE)

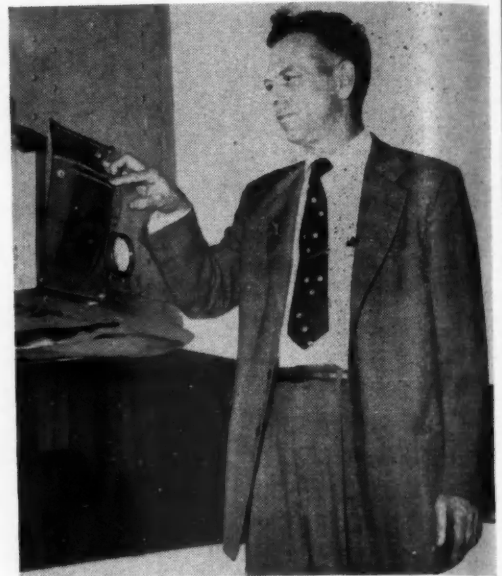


New system has eliminated duplication in servicing, has reduced maintenance cost from 21 to 15 per cent of fleet's gross revenue

By C. H. Rose

Fleet Maintenance Superintendent
East Texas Motor Freight Lines, Dallas, Texas

TRAVELING RECORDS Carry Full PM Story



Each vehicle carries complete set of service records in special holder wherever it may go



IN THE past 12 months, we have developed a new type record program for our shop that gives us a complete history on equipment from the standpoints of service, mechanical repairs and PM operations. This record is kept on the equipment at all times and is available immediately

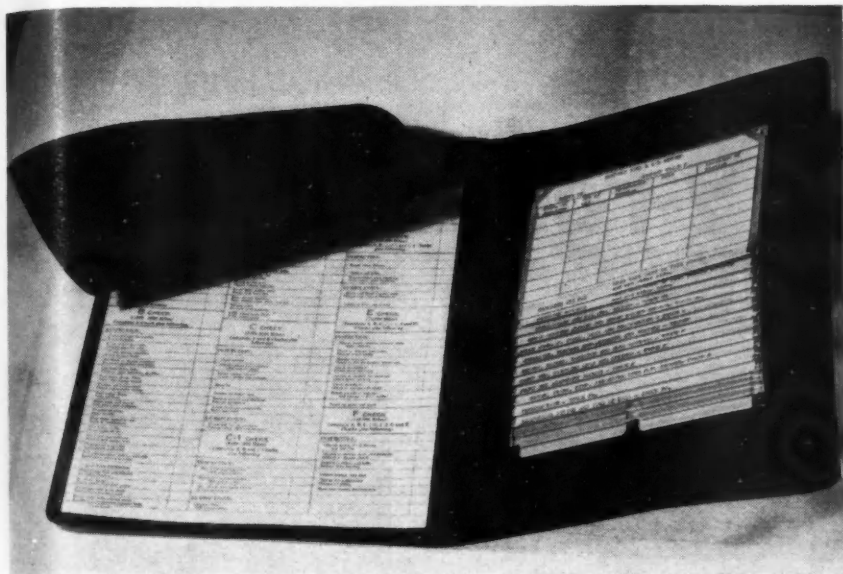
when the truck, tractor or trailer arrives at one of our shops.

In a fleet operation where there are several maintenance shops, such as ours, this card system absolutely eliminates duplication of repairs and similar maintenance operations and enables the mechanics, with the help

of the shop foreman if required, to go directly to the root of the trouble when the unit comes in for work. This in itself accounts for a substantial savings in maintenance and repair cost.

We are finding also that this card system which accompanies the unit

COMMERCIAL CAR JOURNAL, October, 1953



Records, consisting of 12 cards in leatherette binder, aid mechanics at various terminal shops in diagnosing troubles, save time in servicing and repair

Refueling is done by Grade A mechanics. At same time, they inspect vehicles and have authority to send units to shop when they feel it is necessary



has a very good effect upon the drivers. Most of them check the record and the cards carefully before they take a unit out.

Before our present system was put in operation, the maintenance cost was running approximately 21 per cent of the gross revenue. This was

practically a prohibitive figure. One year later, under the operation of our present system, maintenance has been reduced to 15 per cent of gross revenue.

The repair order is made in triplicate on white, pink and buff cardboard. Forms are numbered in the

upper right hand corner. At the left of the form there is a space for the material used; in the center, the repairs made and by whom; in the lower center, the motor number and the serial number; and in the lower right hand corner the total labor charge, total material charge and grand total. On the back of the repair order form at the right is the labor record which we have stamped in and out with our time-clock. The center is the material record. The card can be reversed to give a double listing on labor record.

When the work has been done and the repair order forms completed, the white and pink copies are mailed to our fleet maintenance office in Dallas, where one copy goes to the general office and one copy becomes part of a maintenance record at the shop superintendent's office. The cardboard or buff copy is retained and filed by the shop doing the work.

A service repair and maintenance record card file is made up with a leatherette cover and contains a set of cards with cellophane tab holders.

For a truck or tractor the first two cards of this set show the amount of gas and oil used, the speedometer reading, the date, and the location where gassed. The cards also show the amount of oil added each time the unit was gassed. We are finding, now that we get the record each time the truck is gassed and the record of any oil added, that we are much better diagnosticians than we were before. A running record of oil consumption, for example, will often produce an answer which otherwise could be worked out only after several hours of shop labor.

Help Spot Repairs

THE third card shows speedometer reading, lube and oil changes, the date, the shop where the work was done, chassis lubrication, transmission and differential changes. We are finding very often now that these complete records help immeasurably in spotting a repair need. Without the complete record at our finger-tips, the defect might not have shown up.

The fourth card shows the speedometer reading, date, the shop where the work was done and lists front and rear brake relining and front and rear wheel bearing repacking data. The next card is for engine

(TURN TO PAGE 112, PLEASE)

Trailmobile's 9-Foot Tandem

Ups Payload

Spacing is of special benefit in bridge formula states

▼ TRAILMOBILE INC., Cincinnati, Ohio, recently perfected a nine-foot tandem, primarily for the use of heavy load haulers, such as sand, cement, machine parts, fertilizer, hardware, paper and similar commodities.

With the nine-foot tandem, payload capacity is increased particularly in states where load limitations are based on the bridge formula specified weight per foot allowed depending on the axle spacing.

Axle to axle, the nine-foot tandem is five feet longer than the conventional four-foot regular tandems. It follows in principle the features built into the standard Trailmobile tandem suspension.

With only two moving parts, the tandem is easy to operate and maintain. Trailmobile twin "rocking beams" cushion loads against shocks and brake action. The nine-foot rocking beams are constructed of pressed

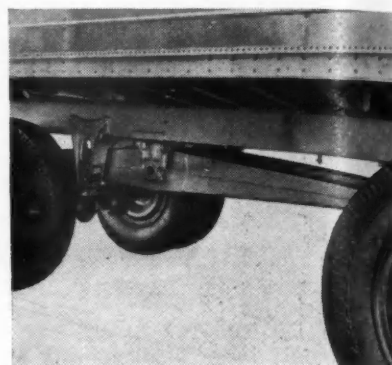
steel and construction is the same as for regular four-door tandems, except for the oversized parts and an optional dock feature.

The nine-foot tandem does not exceed eight-foot overall legal width when turning and contains 37½ per cent more rock than the regular four-foot tandem. Through the balanced rocker beams, the braking force and load distribution are equalized on both axles.

Sharp Angle Turns

THE optional dock feature lifts front axle and tires to provide simplified operation in congested areas, when docking or wherever sharp-angled turns are required. This optional feature does not interfere with the tandem operation.

By addition of a rocker beam between two standard axle suspensions, the load is constantly equalized on both axles regardless of road con-

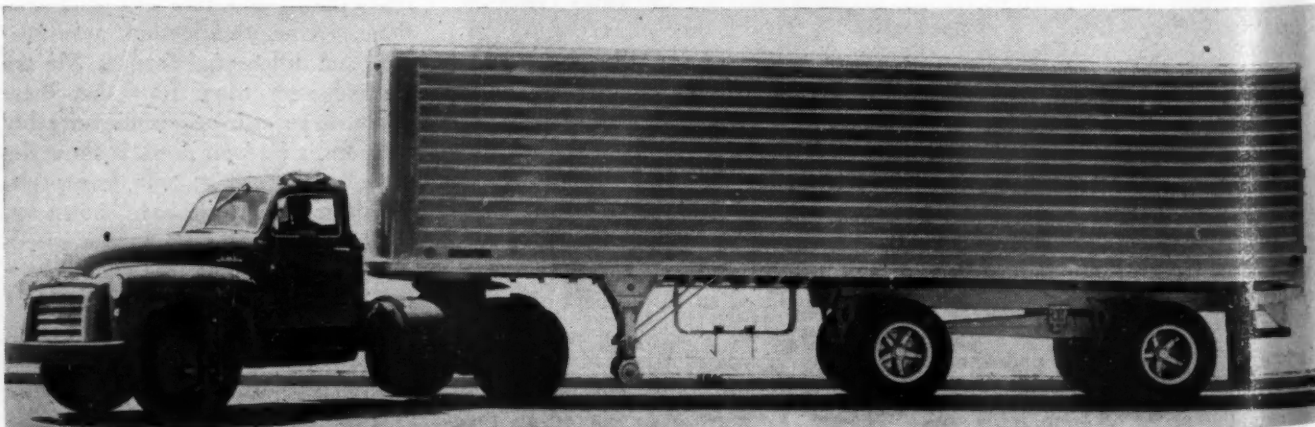


ditions or braking torque. As pressure is exerted upward on one axle, due to road irregularities or braking action, the rocker beams immediately exert an equal downward pressure on the other axles, thereby maintaining an even distribution of the load on both axles. Due to the length of the rocker bars, the movement at the pivot point is reduced to a minimum.

The only lubrication required is at two Alemite fittings on the underside of each rocker arm. These fill a large grease reservoir that keeps trunnion bearings lubricated constantly.

Radius rods are horizontal under the load, maintaining excellent axle alignment. They are insulated against metallic shock at both ends by rubber bushings held under high compression.

Built on "rocking beam" principle of standard Trailmobile tandem, axle does not exceed 8-ft overall width in turning



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Beefed-Up Tractor

Ups Payload by 2½ Tons

Trailing axle and higher
hp engine does the trick

By L. H. Houck

FACED with a state weight limit of 59,000 lb for six wheel tractor and four wheel trailer combinations, L. E. Boling, owner of Boling Truck Service, Kewanee, Ill., has found a way to gain 5000 lb additional payload and still meet the restrictions.

Starting with a new F-20 Reo, he replaced the 250 cu in. engine with a 331 cu in. Gold Comet, removed the standard W6-T98 transmission and replaced it with the heavier CLA-205V unit from an F-22, and added a standard model Hendrickson trailing axle. The result; horsepower rating was upped from 93 @ 3400 rpm to 128 @ 3200 rpm with the engine

governed at 52 mph. Standard 8.25 by 20 tires were retained on the modified tractor.

Result of the changes is that Boling has an F-20 chassis with the power of an F-22 at a weight saving of between 4000 and 5000 lb compared with the standard unit. With the third axle installed, the payload was redistributed so that a greater portion was on the tractor axles.

Here's how the weight saving is calculated:

A standard F-20 has a gross weight of 16,000 lb and a chassis weight, without cab, of 4445 lb. A standard F-22 has a gross weight of 22,000 to 25,000 lb and a chassis weight of 6130 to 7340 lb depending on equipment. Thus, an F-22 tractor with tandem axle weighs 11,800 lb while the modified F-20 with the same power weighs only 7800 lb.

The trailing axle is hooked up

with a hydraulic lift operated from the driver's seat so that it can be raised and lowered while in motion. One advantage of this is that on slippery roads weight normally on the trailing axle can be transferred to the driving wheels for added traction. The driver can also regulate the weight on the trailing axle. Control of the pump is located between the front seat cushions within easy reach of the driver.

While admittedly increasing the power and work for the lighter unit, Boling has accumulated 121,000 miles on it without any extra trouble. Most of the mileage was in strenuous moving van service, and it was recently used under a special permit to haul Caterpillar D8 tractors with the tractor and loaded trailer combination weighing 68,060 pounds. He also admits, however, that the unit is assigned to a good driver.

Hydraulic lift, controlled by lever next to driver, permits operator to raise or lower trailing axle while truck

is in motion thus shifting weight to drive axle, an advantage on slippery roads when more traction is needed





Cold Weather Driving Problems

Here are some new slants on low temperature engine operation
resulting from recent research as adapted from an SAE paper

REDUCTION in cold starting difficulties can be achieved through the use of fuels and crankcase lubricants designed for low temperature operation. These products, however, have definite temperature limits below which starting aids of one form or another must be used depending upon the engine. Gasoline engines usually require starting aids at temperatures below 25°F, while in diesel engines such aids are used with advantage at temperatures as high as 40°F, and in most cases are absolute necessities at temperatures below 0°F. Prior to the development of reliable winter fuels and lubricants and starting aids, it was general practice in all cold areas to keep an engine running con-

By J. A. Miller
California Research Corp.
Richmond, Cal.

tinuously, once starting was achieved. While this practice eliminates starting difficulties, it is expensive both from the standpoint of fuel consumed (a medium sized passenger car engine will consume about one gallon of gasoline per hour of idle operation) and increased engine wear which takes place if engine temperatures are low.

Today, except for certain commercial operations, continuous idling

is used to maintain cab temperatures at a comfortable level rather than to eliminate starting troubles, and the increasing use of heaters to keep jacket coolants at normal operating temperatures is reducing this practice. Continuous idling of engines equipped with automatic transmissions has presented a serious problem in recent years. The major cause of automatic transmission failure during Arctic winter operation has reported as due to overheating caused by long periods of idling with the transmission in the drive position. Thus, the elimination of long idle periods is becoming increasingly important.

(TURN TO PAGE 119, PLEASE)

Fig. 1. Effectiveness of starting fluids in starting diesel engines at relatively high ambient temperatures

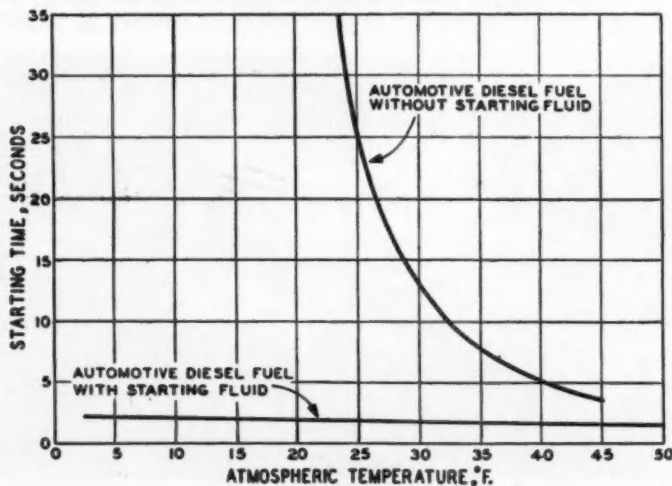
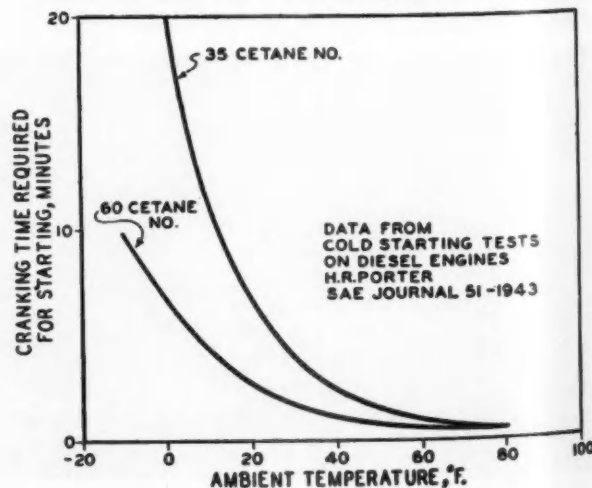


Fig. 2. Starting fluids will work at lower temperatures when sufficient cranking power is available



A Look At Alternator Systems

Summarizing their advantages, this report, adapted from an SAE paper, suggests when and why they should be considered

By D. A. Gilchrist

The Leeco-Neville Co.
Cleveland, Ohio

IT IS desirable to review the design procedures commonly used in the automotive industry to estimate the size generator that will be needed to power your new truck or bus. The automotive battery gives best performance when charged with a constant voltage system. Voltage control units do not meet this requirement exactly but for all practical purposes, we can assume constant voltage for system load calculations.

The old "Rule of Thumb" design procedure assumes a constant voltage and compares electrical load amperes against the generator rating. This method suggests the continuous load amperes should never exceed 75 per cent of the generating rating for a reliable system. Unfortunately many electrical systems designed on this

basis do not keep the battery fully charged under severe operating conditions.

Studies of these failures revealed that time had to be included in the calculations. We soon found that when ampere hour loading was compared against ampere hours generated, and a surplus was available in the generating system, we no longer had discharged batteries. The system calculations using ampere hour values should be based on the poorest operating conditions. The operating

scheduled for the vehicle must be defined or estimated including the per cent of operating time for all accessories, and for all speeds. Practically all vehicles follow a cycling operation procedure and thus the calculations can cover the period of time required to complete one cycle. A tabulation of this data will make it easy to calculate the ampere hours load for all accessories, summing these up and comparing the total figure against the total ampere hours generated. The load ampere hours may be equal to or less than 80 per cent of the ampere hours generated. Sample calculations will be presented later in order to recognize the merits of alternator systems as compared to direct current generators.

(TURN TO PAGE 124, PLEASE)

Fig. 1. A.c.-d.c. and d.c. system performance compared (alternator belt ratio— $2\frac{1}{4}$ to 1, d.c.— $1\frac{1}{2}$ to 1)

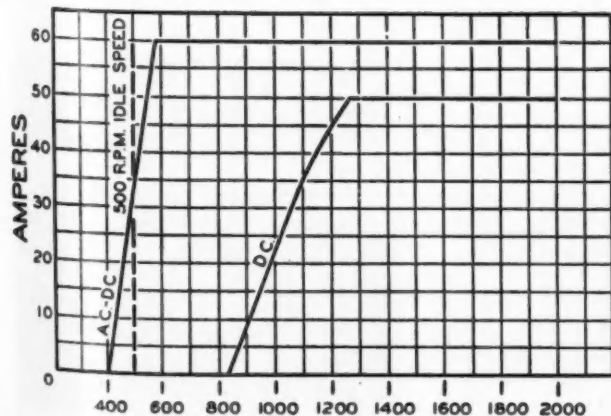
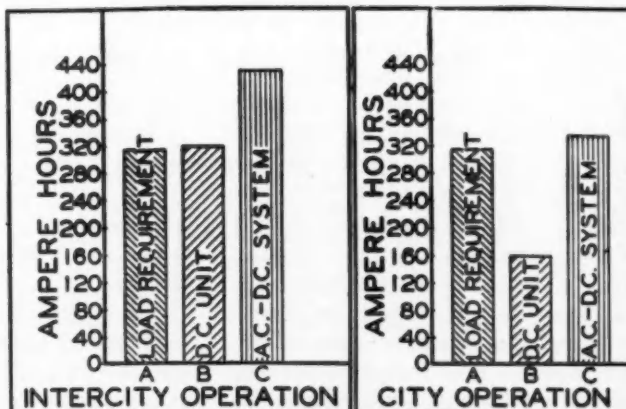


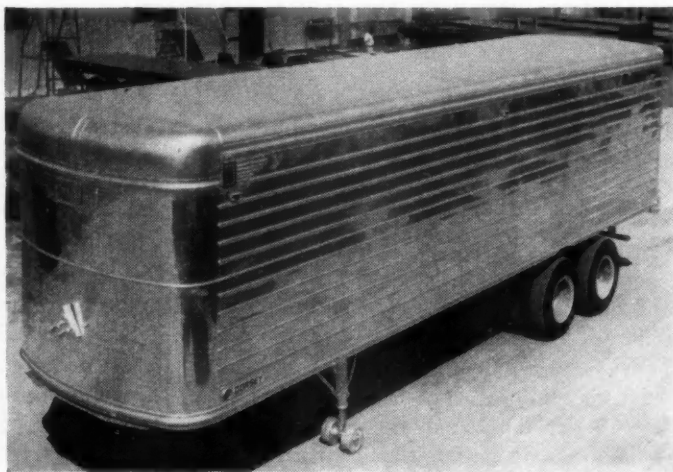
Fig. 2. Ampere-hour comparison between alternator system and d.c. system for both intercity and urban usage



Dorsey's Fleet Chief

Capped with Plastic

Main object of new feature is to eliminate damage



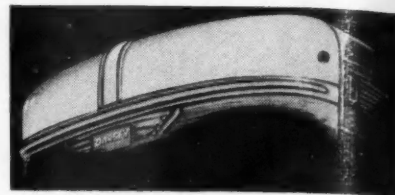
▼ **PLASTIC** roof caps are now used on all new Dorsey Fleet Chief vans. Made of Fiberglas-reinforced polyester, the cap is said to eliminate the problem of damage to the cap by low-hanging tree limbs or other obstructions. In the event that it suffers

a blow sufficient to puncture the plastic, the trailer can be rapidly repaired with a kit which is furnished to the firm's distributors. The repair can be made from the outside of the trailer so that the cargo need not be disturbed.

Strick "Sky Lite" Lights Trailers

▼ **TRANSLUCENT** is also the key word in a new roof feature offered on trailers built by Strick Co., Philadelphia. Further extending use of Fiberglas-reinforced polyester plastic, used in its plastic lined reefer (see July issue, page 96) and in its plastic freighter, the company now offers, as a production option, a translucent plastic roof panel, letting light in.

The plastic "Sky Lite" replaces a standard aluminum roof panel and is as completely watertight and weatherproof as the aluminum. It is designed to eliminate the need for hanging lights and long electric cords in the trailer during daylight. Full visibility in the trailer body permits quicker identification of freight, faster loading and unloading.



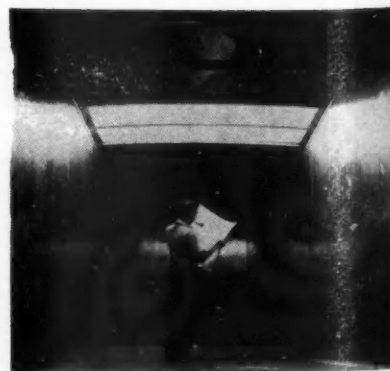
In addition to its strength, the cap is light in weight, won't rust, rot or warp. Dorsey takes advantage of its translucency by leaving areas at the top unpainted to admit light into the forward end of the trailer.

Although maintaining the same appearance as previous models, the new Fleet Chiefs have several additional new features. The horizontal ribs in the aluminum side sheets, formerly rounded, are now stamped out in semi-hexagon shape, giving them added strength. The electrical system has also been arranged so that all wiring is accessible from the exterior of the trailer. Position and size of the equipment conforms to ATA standards. As an added feature, tail lights and directional signals are recessed in heavy cast steel.

Other Features

REDESIGNING of the rear skirt assembly has resulted in a deeper skirt, recessed, cast, rear door latch and stronger cast corner bumper blocks.

The Reyco tandem sub-frame has been shortened to reduce weight, but has been strengthened by tying-in the frame more firmly with the rear skirt assembly. The fifth wheel pick-up plate has also been strengthened by addition of a flange at the front.



COMMERCIAL CAR JOURNAL, October, 1953

Free

PUBLICATIONS

FOR YOUR CONVENIENCE USE THE POSTCARD ON NEXT PAGE

L1. Bearing Manual

Here is a brief but complete camshaft bearing service manual that will be handy in any shop to supply a quick review of camshaft bearing maintenance. The publication has only three sections; why, when and how to replace camshaft bearings.

The "why" is summarized under four major headings as follows: (1) excessive oil consumption, (2) starvation of main and connecting rod bearings, (3) engine foul-up and (4) noisy, inefficient engine. How worn camshaft bearings contribute to each of these troubles is covered in a brief paragraph under each heading. The "when" presents three occasions, based on the manufacturer's experience, when camshaft bearings should be replaced.

Balance of the manual is devoted to a four-step "how" procedure for removing old camshaft bearings and inserting new ones to obtain correct fit. Four large and clear photographs aid in explaining the operations.

To obtain your copy of this camshaft bearing manual, circle L1 on the postcard on the next page.

L2. Highway Data

Here, in a 20-page, letter-size booklet, is an excellent summary of why adequate highways are important to the economic growth of the United States, what the problem is, and suggestions as to what can be done about it. Fleet operators will be able to make very good use of the data summarizing the reasons on how and why our road system is inadequate. All too often fleet users do not have available the readily concise answer available in this publication when a member of the general public asks, "Well, if it is not trucks and buses that make our highways inadequate, what does?"

This is the answer that was prepared

by the Automobile Manufacturers Assn. and presented by it to the Subcommittee on Roads of the House Committee on Public Works. Several multi-colored charts highlight the very readable text that presents a sound case for more adequate highways as the solution to our problem of increasing traffic.

Fleetmen can obtain a copy of this valuable report, and information on how to obtain additional copies for their entire personnel, by circling L2 on the postcard.

L3. Bearing Reports

Complete in one letter-size file folder available to readers is Volume II of a series of reports on roller and ball bearing maintenance. Each of the four-page reports in the folder discusses anti-friction bearing construction to give users information needed in choosing the right type bearing for specific requirements. Each bulletin also has a section on bearing maintenance trouble shooting and "shop hints" on bearing maintenance.

Among the trouble shooting subjects covered are: why bearings fail, reasons why bearings overheat, curing noisy bearings, checking bearings after mounting, precision bearings and tolerances, ball bearing grease lubrication, ball bearing oil lubrication, and selection of anti-friction bearings.

Fleet maintenance men will find this a handy file to help solve ball and roller bearing maintenance and purchase problems. Circle L3 on the postcard on the following page for your copy.

L4. ATA "Who's Who"

Later this month the annual convention of the American Trucking Assns. will be held in Los Angeles, Cal. Last year COMMERCIAL CAR JOURNAL published as a service to those attending

the convention a "Who's Who" of suppliers, fleetmen and ATA staffers in attendance. It met with such an enthusiastic reception, that it is being done again this year. Copies will be distributed at the convention to all those who register. For those who do not make the meeting here is a way to get a copy of this year's "Who's Who at the ATA Convention."

Included in the listings are the industry suppliers at the convention with both their company address and where they can be located at the convention. Each truck line's home address is listed with names of personnel attending the meeting. Handy information in the back of the book includes a list of ATA affiliated state associations and names of ATA staffers attending the meeting.

If you cannot get to the convention and would like a copy of the "Who's Who," circle L4 on the postcard.

L5. Road Report

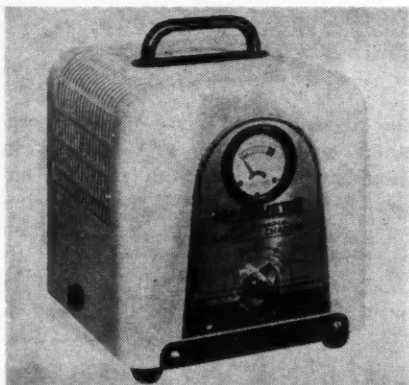
Particularly interesting in this 21-page report on the status of the roads and highways in the United States are the several, full-page charts and diagrams. This is another of several well-written and valuable publications on the need for adequate roads and what can be done about obtaining them. Every fleetman should have a file on this subject and include this report.

Among the charts expanding the compact and understandable text is an unusual one that shows highway construction for five year periods and projects these mileages showing when they have or will be worn out. It indicates that at the present rate only 69 per cent of highway miles in service on Jan. 1, 1952, will be replaced by 1962.

You can obtain a copy of this booklet, together with information on obtaining additional copies, by circling L5 on the postcard on the next page.

NEW Products

ADDITIONAL DETAILS AVAILABLE UPON REQUEST VIA POSTCARD



P1. Battery Charger

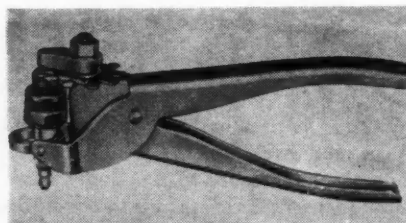
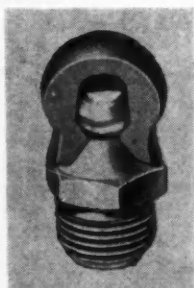
A light-weight, all-purpose portable battery charger for charging both 6 and 12-volt batteries has just been added to the line of Marquette Mfg. Co., Minneapolis, Minn. The new model 207 selenium-plate "Slo-Fast" charger, weighing only 15½ lb, will provide fast, slow and trickle charges to both 6 and 12-volt batteries.

P2. Timing Light

A new universal power timing light, Model No. E-1225, which automatically operates on either 6 or 12-volt equipped vehicles, has been announced by Allen Electric and Equipment Co., Kalamazoo, Mich. This design feature eliminates danger of wrong hook-ups, or burned out flash bulbs.

P3. Fitting Cover

Dirt and other abrasives can be kept from entering grease fittings by using a new cover being produced by Winner Mfg. Co., Fort Wayne, Ind. Known as the "Zur-Kap," and made of oil-resistant neoprene, it is designed for use on equipment using either Zerkor Alemite-type fittings.



P4. Gapping Tool

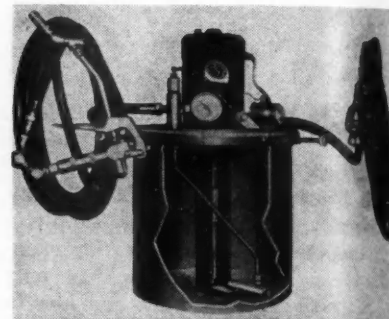
A special plier to simplify accurate setting of spark plug electrodes is announced by Owatonna Tool Co., Owatonna, Minn. The gauge wheel contains ten sizes: .022, .025, .026, .028, .030, .032, .035, .036, .038 and .040 which covers manufacturers' specifications on all makes of spark plugs. The gauge wheel is easily and quickly set to the desired size and once the gap is established the electrode will not spring back.

P5. Adjustable Dockboard

The new "Rite-Hite Unit Dock," produced by Loomis Machine Co., Clare, Mich., is a completely self-contained unit which can easily be installed in front of the present dock, or can be recessed in dock area at a minimum of installation expense. This is a complete, manually operated self-contained loading dock, having both vertical and horizontal adjustment. These units have a ramp of safety tread with side plates to prevent handling units slipping off. They are manually operated, thereby insuring no interruption of operation because of power failure.

P6. Ice Remover

An ice removing chemical to clean steps, walks, drives, loading docks and parking lots is announced by Monroe Co., Inc., Cleveland, Ohio. Known as X-73 Ice Remover, the product is said to melt ice and thaw snow, eliminate ice chipping and reduce the need for snow shoveling. It is also claimed to contain a rust inhibitor which affords protection to automobiles.



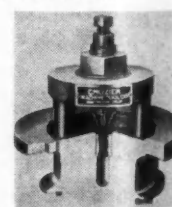
P7. Greasing Unit

A new battery-powered greasing unit which pumps grease directly from the drum is being offered by G & T Industries, Wichita, Kan. It operates on a hydraulic ram pump (powered by an ordinary automotive storage battery) which forces grease through a 25-ft high pressure reinforced hose to a universal gun handle where greasing pressure can be varied from 600 to 12,000 lb psi. Two models available: Model No. A-100 fits drum of 14¾-in. maximum outside diameter and minimum depth of 22 in. Model No. A-110 fits drums of the same diameter but of at least 26-in. depth.

P8. Bushing Extractor

A new bushing and bearing extractor for extremely small size holes has been perfected by Crozier Machine Tool Co., Hawthorne, Cal. The new unit consists of 10 threaded expanding arbors, a draw table, and can handle extraction from any hole from ¼ to 25/32-in. ID dia.

The series 100 is available with a choice of single, two, four, or ten expanding arbors to a set. Arbor sizes are ¼, 9/32, 5/16, ¾, 7/16, ½, 9/16, 5/8, 11/16 and ¾-in. Starter sets include steel carrying box, draw table, draw nut, anti-friction washer and choice of any two (2) of the above expanding arbors.



P9. Wh

Hunter Mo., has in items to th equipment. Group 6 U Truck Wh Wheel Bal to 9:00 x rim assem The model The Grou port Truck Heavy-Dut Instrument table utili various wh The Unive motor, hea hp, 220 v, tric motor high speed

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The latest developments in parts, accessories, equipment and tools for the fleet shop

CIRCLE APPROPRIATE NUMBERS ON POSTCARD FOR MORE INFORMATION



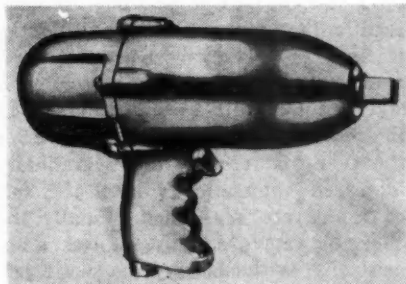
P9. Wheel Balancer

Hunter Engineering Co., St. Louis, Mo., has introduced several additional items to their line of wheel balancing equipment. They are as follows: The Group 6 Universal Bus and Transport Truck Wheel Balancer. The Group 5 Wheel Balancer—for truck wheels up to 9:00 x 20 size. An optional lid and rim assembly for balancer spinners. The model 48-L Run-Out Gage.

The Group 6 Universal Bus and Transport Truck Balancer is comprised of the Heavy-Duty Hunter Tune-In Balancing Instrument, the 8 hp Spinner and a portable utility cabinet which holds the various wheel adaptors and accessories. The Universal Wheel Spinner is a dual motor, heavy-duty unit. It has two 4 hp, 220 v, high rpm heavy-duty electric motors connected by means of a high speed coupling.

P10. Engine Alarm

An automatic engine alarm is being manufactured by the Sudbury Laboratory, South Sudbury, Mass. Whenever the temperature of the engine goes over 200 deg, or the oil pressure drops to under 3 lb pressure, the alarm gives a combined audible (buzzer) signal and a visual (flashing red light) signal. It has a one-minute delayed action mechanism built into it to prevent any false alarm being given during the first 60 sec.

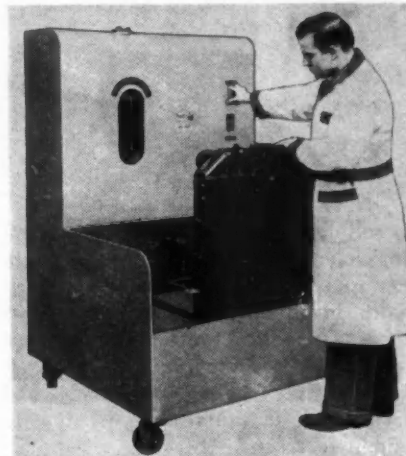


P11. Impact Wrenches

Mall Tool Co., Chicago, has announced three new pneumatic impact wrenches for tightening or removing of bolts and nuts, removing of broken cap screws and studs, tapping, reaming and driving and removing of lag screws and screw spikes. The Model No. PW-5014S takes $\frac{7}{8}$ -in. bolt or nut; its spindle has $\frac{3}{4}$ -in. square drive; speed is 1600 rpm free at 90 psi. The Model No. PW-4012P takes $\frac{3}{4}$ -in. bolt or nut; spindle has $\frac{3}{4}$ -in. square drive; speed is 1300 rpm free at 90 psi. Model No. PW-308P has capacity of $\frac{1}{2}$ -in. bolt or nut; spindle has $\frac{1}{2}$ -in. square drive; free speed is 1400 rpm at 90 psi.

P12. Oil Filters

For either internal or external mounting, a new series of large-capacity oil filters for trucks and heavy equipment has been announced by Wix Corp., Gastonia, N. C. The No. WF-750-C is heavy chrome plate and the No. WF-750 is neutral cream with maroon mounting straps. Bar-type cover handle eliminates cover bolts. Double center tube prevents drainback without valving. Neoprene-type cover gasket for positive, all around seal, and heavy gage, drawn steel construction. A selection of three heavy duty oil filter cartridges for "750 Series" filters is available. There are the Wix Sock type cartridge CW-750 and the can type CW-750-M, both containing Wixtie, and the can type CW-750-MS containing a special filtrant of highly absorbent paper and wood flock.

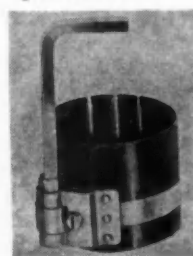


P13. Radiator Tester

Inland Manufacturing Company, Omaha, Nebr., has announced its Model No. 50A radiator "Flo-Test" machine. The new model tests radiators on or off the vehicle. It reportedly operates on a single electrical outlet and has no drains or water connections. Specifications for the machine are overall—40-in. length, 40-in. width, 64-in. height. The flow capacity maximum is 76 gpm.

P14. Ring Compressor

Zim Mfg. Co., Chicago, announces their new one-band piston ring compressors that take all rings at one time, including skirt rings on passenger car pistons. A heavy duty, self-locking ratchet pawl prevents premature release. Bottom flare is eliminated because the tension band is made of high grade spring steel. There are three of these new one-band Zims, as follows:



Model No.	Capacity	Depth	Weight
No. 217	1 $\frac{3}{4}$ to 3 in.	2 in.	5 $\frac{1}{2}$ oz
No. 218	2 $\frac{1}{8}$ to 5 in.	2 $\frac{1}{2}$ in.	7 oz
No. 219	2 $\frac{1}{8}$ to 5 in.	1 $\frac{1}{8}$ in.	6 oz

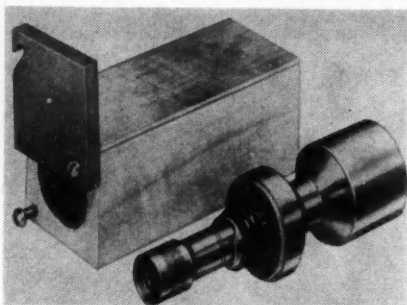
(TURN TO NEXT PAGE, PLEASE)

New Product Descriptions

Continued from Page 91

P15. Valve-Lifter Gage

Jergens Tool Specialty Co., Cleveland, Ohio, announces the development of a new hydraulic valve-lifter gage for "L" head engines. The new gage



is calibrated within normal manufacturing tolerances for hydraulic valve-lifters to eliminate the time and guesswork involved in reassembling valve-lifter assemblies to check valve stem lengths after regrinding valve seats. It gives a direct reading and automatically locks itself in the reading position to eliminate errors.

P16. Welding Torches

Two new welding torches are now available from Marquette Mfg. Co., Minneapolis, Minn. The Model No. J has special "O" ring seal construction to eliminate gas leaks and avoid unnecessary servicing. The torch is available with eight tip assemblies to give a welding range from 20 gage to $\frac{3}{8}$ in. Model No. L cuts up to two-inch steel with ease. Model No. H produces full "pre-set" heat instantly.

P17. Light-Weight Hoist

The Heil Co., Milwaukee, Wis., now has available on a production basis a new twin cylinder Model No. 2426 hoist, specifically designed for 8 to 17-ft long platform bodies and 8 to 10-ft dump bodies. Operating features include a 50-deg dumping angle and a low mounting height. Space from top of the truck chassis to bottom of the body is 9 15/16-in. The hoist can be used with any platform body—even a $\frac{3}{4}$ ton or 1 ton pickup truck if the frame has no "kick up," and the outside width is 36-in. or less. Payload capacity of the new hoist when used with a platform body ranges from 3 1/4 tons with a body length of 17 ft, to 6 1/4 tons with a body length of 9 ft. When mounted with a dump body the payload capacity is rated from 5 1/2 tons to 4 1/4 tons.

P18. Battery Chargers

A redesigned line of battery chargers for use on both 6 and 12-volt batteries has been announced by Bowers Battery and Spark Plug Co., Reading, Pa. The new "Saf-T-Taper" 6/12 volt fast charger is adaptable to either 6 or 12-volt batteries by flicking a toggle switch. Also incorporated into the new 6/12 volt charger is the "Saf-T-Taper" feature that automatically adjusts the starting rate of charger to the exact amperage rate that the battery will take safely with overheating. As the battery begins to accept a heavier charge the amperage rate is gradually increased automatically until the full charging rate is reached. Finally the charging rate gradually reduces automatically as the battery reaches maximum charge. An additional feature is the two-wheel, rubber tire detachable cart, permitting the charger to be purchased with or without cart. Also available for 6 and 12-volt charging is the "Utility Charger" and the "Trickle Charger." The utility charger will recharge a normally discharged 6 or 12-volt battery overnight. The trickle charger automatically maintains 6 volt or 12-volt batteries or any combination of 6 and 12-volt batteries up to a total of 30 cells.

P19. Tire Demounter

Bos Tool Co., Pennsgrove, N. J., has introduced a new, hydraulically-operated truck tire demounter. The unit is



used for removing stuck or frozen tires from all type trucks by hydraulic pressure. It will handle all size truck tires 15 to 24-in. It is portable, can be used in the shop or on the road.

P20. Gear Pullers

A new line of gear and wheel pullers is available from J. H. Williams and Co., Buffalo, N. Y. Jaws and blocks are forged from selected steel and heat-treated for extra strength and safety. Jaw clips are self adjusting. Forcing screws are made of high quality alloy steel and heat-treated. New "unified" thread on screws and blocks is the latest development in screw thread design.

P21. System Cleaner

A cooling system cleaner is announced by Apex Chemicals Ltd., Toronto, Canada. It comprises a pumping unit with a capacity of 900 gal per hr and 5 psi at normal unrestricted flow with a maximum possible of 9 psi on a completely blocked system. A fluid-level control valve automatically maintains a constant liquid volume flowing in addition



to the normal contents of the vehicle cooling system. Direction of flow is controlled by a master valve. A pressure gage is furnished for each of the two outlets to the vehicle cooling system so that changes in pressure or flow may be seen in either normal or reverse-flush direction. Air-Pressure is employed in a combination with liquid chemicals to provide a positive higher frequency agitation to insure mechanical cleaning in cylinder head coolant passages and water jacket as well as the radiator. Pressurized flow returning from the cooling system in either direction is broken by means of a sealed visible chamber at the base of which is a filter for removing any particles of foreign matter before the cleaning solution is recirculated.

P22. Impact Wrench

Snap-on Tools Corp., Kenosha, Wis., announces the availability of a new $\frac{1}{2}$ in. square drive electric impact wrench. This tool, the EW-500, can be used with a variety of sockets and attachments to increase the working

(TURN TO PAGE 142, PLEASE)

The question of **CHROME** rings becomes the question of which **CHROME** rings...



Experience has proved that chrome is the best answer to the higher engine speeds, engine temperatures, and compressions of modern cars. Some chrome ring sets are better than others. Best of all are...

Sealed Power KromeX FULL-FLOW RING SETS

- 1 Top compression ring is chrome-alloy cast iron with **SOLID CHROME** face, factory-lapped to a light-tight finish, with Granosealed sides for flexibility.
- 2 Side rails of MD-50 oil ring have **SOLID CHROME** faces, Granosealed sides for flexibility. Hundreds of thousands of cars have proved this ring best for oil control even in badly tapered and out-of-round bores.
- 3 All rings are beveled or tapered to thread-line contact for quick seating and blow-by control.

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST IN NEW TRUCKS

BEST IN OLD TRUCKS

1953 New Truck Registrations by Makes by States*

STATE AND MONTH	Auto-car	Brock-way	Chevrolet	Diamond T	Dodge	Federal	Ford	FWD	GMC	International	Ken-worth	Mack	Peter-bilt	Pontiac	Reo	Stude-baker	White	Willis	All Others	Total
Alabama..... July			847	2	5	123	485		147	103	3				1	36	21	9	1,002	
..... 7 Mos.	12	1	4782	12	12	1048	7	2864	1229	740	82				22	267	164	96	11,312	
Arizona..... July	2		196	4		38		134	68	43	3				3	18	7	7	530	
..... 7 Mos.	2		1516	9	5	380		1024	524	437	18				34	157	41	110	4,301	
Arkansas..... July	1		750			132		838	1	225	169				2	13	34	6	2,020	
..... 7 Mos.	3		4511	6		791	4	3105	1445	909	26				7	33	78	106	11,336	
California..... July	13		1911	13	10	542		8901	4725	3729	140				183	160	372	1196	3,222	
..... 7 Mos.	98	3	18248	178	90	4888	1	251	111	116	1				42	7	19	15	41,310	
Colorado..... July	4		414	2	1	75		1685	11	723	883				9	8	182	11	1,001	
..... 7 Mos.	24		2437	61	12	534	6	123	32	62					43	162	182	126	4,700	
Connecticut..... July	1		176	8	4	66		1038	398	510	1					8	1	13	1,071	
..... 7 Mos.	17	26	1509	43	49	839	26	55	17	28					9	59	9	2	1,877	
Delaware..... July			84	2	2	23		378	110	185					1	2	8	1	1,004	
..... 7 Mos.	4	8	897	4	2	173	8	31	27	23					13	17	54	79	1,770	
Dist. of Columbia..... July			79	13	24	357		273	219	180					33	15	869	612	14,115	
..... 7 Mos.	6	1	873	4	4	173		413	145	128	1				3	81	43	18	1,704	
Florida..... July	1		8137	36	32	1449	11	3312	1313	1140					5	24	518	127	13,891	
..... 7 Mos.	16		761	1	11	129		3499	1453	1170					8	1	20	30	6,000	
Georgia..... July	7	5	5582	17	11	1308		152	90	74	14				9	171	62	31	4,801	
..... 7 Mos.	7	5	235	3	2	47	2	1030	611	672	40				18	77	20	31	3,390	
Idaho..... July			1479	14	2	410		802	2124	3930	3				119	83	738	418	27,167	
..... 7 Mos.	1		1276	41	4	310		802	2124	3930	3				119	83	738	418	27,167	
Illinois..... July	22		9693	58	58	2808	8	844	2124	3930	3				3	64	704	361	18,006	
..... 7 Mos.	22		1087	9	5	251	8	844	2124	3930	3				3	64	704	361	18,006	
Indiana..... July	15		8626	62	48	1682	18	3618	1315	2341	1				1	29	296	112	11,893	
..... 7 Mos.	15		838	62	48	1682	18	3618	1315	2341	1				1	29	296	112	11,893	
Iowa..... July	3		4232	48	24	845	1	3332	1196	1990					4	12	307	90	11,572	
..... 7 Mos.	3		580	3	11	773	8	595	1196	1990					4	12	307	90	11,572	
Kansas..... July	1		4560	27	11	136	8	844	1101	1082					2	3	321	70	11,123	
..... 7 Mos.	1		886	6	17	840	14	2874	1101	1082					2	3	321	70	11,123	
Kentucky..... July			4409	21	12	106		481	1175	1122					31	1	414	55	11,529	
..... 7 Mos.	1		587	2	12	820	1	3096	1175	1122					31	1	414	55	11,529	
Louisiana..... July	8		4830	18	4	31		106	61	372					61	4	13	25	3,495	
..... 7 Mos.	8		161	4	7	338	2	809	61	372					61	4	13	25	3,495	
Maine..... July	9	7	1143	22	7	102	8	233	114	717					27	3	19	13	6,728	
..... 7 Mos.	9	7	290	8	18	923	14	1630	114	717					27	3	19	13	6,728	
Maryland..... July	11	40	2309	8	8	97	1	269	105	115					32	1	28	27	1,096	
..... 7 Mos.	11	40	309	8	8	97	1	269	105	115					32	1	28	27	1,096	
Massachusetts..... July	7	10	309	47	76	803	12	1800	879	768					180	13	25	30	3,073	
..... 7 Mos.	59	57	2286	47	76	803	12	1800	879	768					180	13	25	30	3,073	
Michigan..... July	8		1085	16	40	290	1	1091	2109	1507					7	12	168	361	23,285	
..... 7 Mos.	48	2	8893	102	180	2684	113	6897	2109	1507					7	12	168	361	23,285	
Minnesota..... July	1		407	19	6	112		1040	470	2					37	3	335	79	11,392	
..... 7 Mos.	1		3836	48	38	1040	13	3131	470	2					37	3	335	79	11,392	
Mississippi..... July	2		546	1	6	880		2394	1267	909					16	1	35	463	17,628	
..... 7 Mos.	2		3922	1	6	178		710	1267	909					16	1	35	463	17,628	
Missouri..... July	2		1116	2	107	1380		4346	1	1941					4	1	150	26	4,407	
..... 7 Mos.	10		7135	34	107	1380		4346	1	1941					4	1	150	26	4,407	
Montana..... July			174	5	2	270	2	1078	391	212					10	1	202	63	1,263	
..... 7 Mos.	1		1533	5	4	270	2	1078	391	212					10	1	202	63	1,263	
Nebraska..... July			357	9	4	438		2182	780	1363					1	1	79	2	1,263	
..... 7 Mos.	11		2914	74	10	438		2182	780	1363					1	1	79	2	1,263	
Nevada..... July			48	1		169		261	185	102					5	3	11	1	1,749	
..... 7 Mos.			402	1		20		42	185	102					5	3	11	1	1,749	
New Hampshire..... July			78	3	5	161		386	166	172					30	19	61	7	1,901	
..... 7 Mos.	1		812	3	12	158	7	501	166	172					30	19	61	7	1,901	
New Jersey..... July	15	25	846	57	91	1269	50	3859	1235	1334					219	9	47	311	13,574	
..... 7 Mos.	57	185	4715	57	91	1269	50	3859	1235	1334					219	9	47	311	13,574	
New Mexico..... July			286	12	211	4	859		442	316					11	51	128	37	3,889	
..... 7 Mos.	1		1481	12	10	419	5	888	442	316					11	51	128	37	3,889	
New York..... July	18	70	1130	34	70	3706	57	6303	2320	3353					17	290	607	553	26,227	
..... 7 Mos.	240	482	6738	190	6	185	57	600	2320	3353					17	290	607	553	26,227	
North Carolina..... July			885	11	31	1251	3	3728	1816	1388					192	22	478	288	14,904	
..... 7 Mos.	12		5753	11	31	1251	3	3728	1816	1388					192	22	478	288	14,904	
North Dakota..... July			182	2	250		1091		249	378					42	8	88	9	3,380	
..... 7 Mos.	1		990	2	27	343	8	1032	249	378					42	8	88	9	3,380	
Ohio..... July	6		1043	15	27	343	8	1032	249	378					42	8	88	9	3,380	
..... 7 Mos.	72	8	6188	98	128	2911	67	6123	249	378					42	8	88	9	3,380	
Oklahoma..... July	2		626	6	17	883	1	3276	150	142					11	5	33	194	1,042	
..... 7 Mos.	8		5082	6	17	883	1	3276	150	142					11	5	33	194	1,042	
Oregon..... July			288	63	12	829	6	2037	1002	1122					53	26	184	605	2,000	
..... 7 Mos.	21		2379	63	12	829	6	2037	1002	1122					53	26	184	605	2,000	
Pennsylvania..... July	18		1341	128	89	3431	94	6152	1999	3521					3	11	67	29	1,000	
..... 7 Mos.	101	374	8974	128	89	3431	94	6152	1999	3521					3	11	67	29	1,000	
Rhode Island..... July			62	11	14	203		358	90	86					11	2	223	60	1,000	
..... 7 Mos.	24	2	474	11	14	203		358	90	86					11	2	223	60	1,000	
South Carolina..... July			405	2	3	594		1826	73	100					1	4	98	11	1,000	
..... 7 Mos.	1		3082	2	3	594		1826	73	100					1	4	98	11	1,000	
South Dakota..... July			161	20	1	281		790	156	137					19	2	320	188	1,000	
..... 7 Mos.	1		1019	20	1	281		790	156	137					19	2	320	188	1,000	
Tennessee..... July			597	19	10	1241	19	3197	480	516					7	36	129	710	1,000	
..... 7 Mos.	3	8	5129	19	10	1241	19	3197	480	516					7	36	129	710	1,000	
Texas..... July	14		2785	95	26	3236	18	12575	3918	4140					2	176	11	117	3,002	
..... 7 Mos.	89		19309	95	26	3236	18	12575	3918	4140					2	176	11	117	3,002	
Utah..... July			164	23	3	226		769	293	359					15	1	14	82	1,000	
..... 7 Mos.	1		1068	23	3	226		769	293	359					15	1	14	82	1,000	
Vermont..... July			79	2	2	182		259	133	106				</						

CCJ's Truck Specifications

COMPILED FROM DATA SUPPLIED EACH MONTH BY MANUFACTURERS

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are

those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the

weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix.
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse.
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
G-H—Goodyear-Hawley type.
H—Hotchkiss.
Her—Hercules.
HS—Hall-Scott.
Int—International Harvester.
L—Lockheed.
LeR—LeRoi.
LH—Lockheed front, Wagner "Hi-Tork" rear.
LT—Lockheed type front, Timken rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Shu—Shuler.
Spi—Speer.
T or Tim—Timken-Detroit Axle Co.

TW—Timken-Detroit—Westinghouse.
TW—Timken-Detroit—Wisconsin.
Var—Variable.
WG—Wagner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Wg—Wagner "Hi-Tork".
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

BRAKES—SERVICE

Location
4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type

I—Internal.
X—External.
Operation
A—Air.
H—Hydraulic.

V—Vacuum.
D or Dp—Dual Primary.

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.
F—Mechanical, foot operated

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry.
c—Cast iron.
Cc—Composite Front, Cast Iron in rear.

Ce—Centrifuge.
Ci—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center.
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.

Z—Reinforced (X) member frame, box type sections.
BG—Box girder.

REAR AXLE

Final Drive and Type

R—Bevel.
CD—Chain Drive.
F—Full-floating.
H or Hy—Hyphoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
¼—Three Quarters Floating.
½—Semi-Floating.
T—Torque Tube.

GEAR RATIOS

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (applies).
R—Radius Rod.
L—Parallel Torque Rods.
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Ford or Chevrolet Models.
(R)—Remanufactured Fords.
—Denotes "Includes Cab" when used with weights or prices.

BROWN

—All six engines listed are available on all five models of trucks.
—Steel frame only. Also available with Aluminum frame 10x3½x½.
—Many variations available with Fuller or Spicer transmissions.

CHEVROLET

—Includes spare tire, full fuel tank and cooling system.
—7.50/20 can be used on the front with no decrease in G.V.W. when 8.25/20 are used on dual rear wheels.
—Own Loadmaster engine available at extra cost.
—8.25/20 front tires are required when 9.00/20 dual rears are used.
—Diameter: (Average) Front, 2.6858; Front Center, 2.7168; Rear Center,

2.7478; Rear, 2.7788. Total Length 5 ft.

—4 speed transmission available.
—Also available in 5.14 ratio.
—5.43 available.
—Two speed axle available.

—8¼x2½x¼ is used with heavy-duty equipment.
F.C.—Forward control chassis for door-to-door delivery bodies. These chassis do not have cowl.

CORBITT

—Available with optional tires and axles for less G.V.W. rating.
—Also available with Cummins HRB600 and NHB-600.

DODGE

—Front only: Rear 7.00/16S.
—Front only: Rear 8.25/16S.
—Front only: Rear 7.50/20.
—Front only: Rear 9.00/20.
—Front only: Rear 10.00/20.
—Rear of transfer case.
—Truck - O - Matic transmission available.
—Twin carburetion.
—Two speed rear axle available.

DUPLEX

—Torque Divider, Timken T70-2 speed.

FEDERAL

—Diesel engine obtainable.
—Two speed transmission obtainable.

—Auxiliary transmission Spicer 6231B with 3 forward speeds.

—Auxiliary transmission Spicer 8031.

—5501, 6001 and 6501 have single speed, double reduction rear axle.
—Radius rods obtainable.
—For wheelbases below 196" —9 x 3¼ x ¼.
—For shorter wheelbases, 10 x 3¼ x ¼.

—For shorter wheelbases, 10 x 3¼ x ¼.
—Diesel engine obtainable.
—Overdrive optional.
—Torque Divider Timken T70-2 speed, T50 obtainable.
—SW3020, SD3020 obtainable.
—SW3020 obtainable.
—Rear only.
—With R series rear axle, reduce G.V.W. by 4000 lbs.

FORD

—Front only: rear, 8.25/16S.

FWD

—Four wheel steering.

KENWORTH

—Timken T13129 PA Tra 7 1½ Axle.
—14.00/24, front; 16.00/24, rear.
—C.O.E. optional.

OSHKOSH

—Includes cab.
—1081 in.
—Hydraulic coupling.

—Other Cummins 6 cylinder engines optional.
—Includes cab and dual tires on front, center and rear axles.
—Dependent upon engine.

REO

—Model 331-OA and 331-OA LPG engines can be furnished.
—Two speed axle available.
—Double reduction and 2 speed available.
—Buda 6DT8-468 diesel engine available.
—Model 255-OA-LPG engine can be furnished.
—Front only: rear, 10.00/20.
—OH-160 engine can be furnished.

STERLING

—Rear only: Front 11.00/24.
—Rear only: Front 11.00/22.
—Own EJ three speed auxiliary transmission furnished.
—Timken T70 two speed torque divider furnished.
—Parking brake at rear of auxiliary transmission.
—Rear only: Front 12.00/24.
—Rear only: Front 14.00/24.
—Rear only: Front 16.00/24.
—1125 cu. in.
—Own model FJ three speed auxiliary transmission furnished.
—Timken T76 two speed transfer case furnished.
—Timken T77 two speed transfer case furnished.

—Parking brake at rear of transfer case.
—Tapered, 9 x 7 x 3¼ x ¼.
—Also available with Cummins Diesel engine and appropriate transmission.

STUDEBAKER

—Two speed 6.13-8.10 and H.D. 6.20 or 6.80 optional.
—Two speed 6.13-8.10 optional.

TRUCKSTELL

—Single front, dual rear.
—With 3 speed power divider.
—Weight with cab and maximum tires.
—Including slip-over reinforcing frame channels.
—Air brake optional.

WARD LA FRANCE

—Available with optional rear axles.
—Available with 11.00/22 or 12.00/20 tires for G.V.W. of 60,000 lbs and optional front and rear axles.
—Auxiliary transmission Fuller 3A65, 3B65, 3A92 and 3B92.

WILLYS

—Complete vehicle-Pick-up Type body.
—Three speed transmission, 2 speed transfer case.
—Or Spicer 53-2 at discretion of manufacturer only.

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For Key to References and Abbreviations See I

Whatever you be... over-...
... you are a
trouble-free
Brakes and
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says: Jack Canole, SUPERINTENDENT OF THE CHICAGO DIVISION
CONSOLIDATED FORWARDING COMPANY, INC.



CONSOLIDATED FORWARDING COMPANY, Inc.
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CHICAGO 7, ILLINOIS

Wagner Electric Corporation
6400 Plymouth Avenue
St. Louis 14, Missouri

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Like most fleet operators, Consolidated Forwarding Company continuously stresses the importance of keeping safety standards at the highest degree possible. There are many factors of maintenance and operation that play an important part in this effort. One of the more vital factors is by making sure that the air brake systems on our trucks are safe systems and provide maximum service on the road, yet require a minimum of repair.

I especially like Wagner Air Brake Systems because of the fine performance of the Wagner Rotary Air Compressor. In my opinion, this compressor has materially helped lower expensive maintenance costs. In fact, I have never had to replace a single Wagner Rotary Air Compressor that we have used in our operation. I rely on the dependability of the Wagner Rotary Air Compressor because, as far as I'm concerned, it has the quickest recovery of air pressure and helps assure our drivers of safe, quick stops in any emergency. Because of this, I feel that Wagner Air Brakes help maintain our perfect safety record.

Sincerely yours,

Jack Canole
Jack Canole
Superintendent of Chicago Division

JC ek



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K53-14

67	Cab.....
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COMME

Line Number	MAKE AND MODEL	WHEEL-BASE		TIRE SIZES		ENGINE DETAILS					TRANSMISSION		REAR AXLE		FRONT AXLE	BRAKES				FRAME						
		Minimum	Maximum	Standard	Authorized	Chassis Weight (See definition)	No. of Cylinders	Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M.	Number and Diameter of Bearings	Governor Standard	Make and Model	Make and Model	Gear and Type	Drive & Torque	Gear Ratio	Range in Mph	Make and Model	Make Location	Hand Type	Min. Std. W. B.	Side Rail Dimensions	
1	Ford-Const'd C-500 C.F.	116	156	162	162	6125/8.25/20D	8-3	5.5x3.5	2797	0.244	145-3800	5-2 1/2x15.0	Own	Own	Own	444	697	HF	H	** -7.2	Own	O4IH	444	697	66	9x3 1/4
2	C-500 C.F.	116	156	162	162	6325/9.00/20D	8-3	5.5x3.5	3177	0.254	155-3800	5-2 1/2x15.0	Own	Own	Own	485	729	SF	H	17-7.67	Own	O4IH	485	729	66	9x3 1/4
3	P-500 Parcel Div.	104	122	7800	7800	3065/7.00/16S	6-3	5.5x3	2157	0.185	101-3500	4-2 1/2x12.7	Own	Own	Own	196	302	HF	H	** -4.86	Own	O4IH	196	302	82	6-2 1/4 x 10
4	P-500 Parcel Div.	130	130	14000	14000	4100/7.00/18	6-3	5.5x3	2157	0.185	101-3500	4-2 1/2x12.7	Own	Own	Own	323	494	HF	H	6.2-6.8	Own	O4IH	323	494	108	8-8 1/2 x 8 1/4
5	B-500 School Bus	154	154	12000	12000	4025/6.50/20D	6-3	5.5x3	2157	0.185	101-3500	4-2 1/2x12.7	Own	Own	Own	323	494	HF	H	6.2-6.8	Own	O4IH	323	494	128	8-8 1/2 x 8 1/4
6	B-500 School Bus	154	154	12000	12000	4110/6.50/20D	6-3	5.5x3	2396	0.194	106-3500	4-2 1/2x12.7	Own	Own	Own	323	494	HF	H	6.2-6.8	Own	O4IH	323	494	128	8-8 1/2 x 8 1/4
7	B-600 School Bus	192	192	16000	16000	4745/7.50/20D	8-3	5.5x4	2546	0.217	112-3500	4-2 1/2x13.8	Own	Own	Own	366	561	HF	H	6.8-7.2	Own	O4IH	366	561	160	8-9 1/2 x 8 1/2
8	B-700 School Bus	192	192	16000	16000	4720/7.50/20D	8-3	5.5x4	2396	0.194	106-3500	4-2 1/2x12.7	Own	Own	Own	366	561	HF	H	6.8-7.2	Own	O4IH	366	561	160	8-9 1/2 x 8 1/2
9	B-700 School Bus	233	233	19500	19500	5690/7.50/20D	8-3	5.5x4	2546	0.217	112-3500	4-2 1/2x13.8	Own	Own	Own	444	697	HF	H	** -7.2	Own	O4IH	444	697	205	9-9 1/2 x 8 1/2
10	B-700 School Bus	233	233	20000	20000	6135/8.25/20D	8-3	5.5x3	2797	0.244	145-3800	5-2 1/2x15.0	Own	Own	Own	444	697	HF	H	** -7.2	Own	O4IH	444	697	205	9-9 1/2 x 8 1/2
11	Kenworth (D) 801	153	153	26000	26000	12500/10.00/20	6-4	5.5x4	7431	0.540	165-1800	4-1 1/2x16.4	YBL 8241	YBL 8241	4Tm U200P	722	1174	H2F	H	9.1-9.78	Tim F-900DPA	W41A	722	1174	67 1/2	9-9 1/2 x 8 1/2
12	(D) 801	153	153	26000	26000	11600/10.00/20	6-4	5.5x4	5406	0.460	160-1800	4-1 1/2x13.8	YBL 8241	YBL 8241	5Tm U200P	722	1174	H2F	H	9.1-9.78	Tim F-900DPA	W41A	722	1174	67 1/2	9-9 1/2 x 8 1/2
13	(D) 801	153	153	26000	26000	37400	6-4	5.5x4	7431	0.540	165-1800	4-1 1/2x16.4	YBL 8241	YBL 8241	10Tm U200P	722	1174	H2F	H	9.1-9.78	Tim F-900DPA	W41A	722	1174	67 1/2	9-9 1/2 x 8 1/2
14	Lin. A-15	120	120	9000	9000	6000/7.50/20S	6-3	5.5x3	2435	0.184	91-3200	2-1 1/2x10.1	Own	Own	Own 601	306	478	N	N	None	Tim F30828H LAIH	W41A	306	478	None	None
15	A-25	120	120	11000	11000	6200/7.50/20S	6-3	5.5x3	2435	0.184	91-3200	2-1 1/2x10.1	Own	Own	Own 601	306	478	N	N	None	Tim F30828H LAIH	W41A	306	478	None	None
16	A-35	120	120	11000	11000	6200/7.50/20S	6-3	5.5x3	2435	0.184	91-3200	2-1 1/2x10.1	Own	Own	Own 601	306	478	N	N	None	Tim F30828H LAIH	W41A	306	478	None	None
17	A-45	120	120	11000	11000	6200/7.50/20S	6-3	5.5x3	2435	0.184	91-3200	2-1 1/2x10.1	Own	Own	Own 601	306	478	N	N	None	Tim F30828H LAIH	W41A	306	478	None	None
18	Mar. Her. DVL-4	90	118	6750	6750	8.25/16S	4-3 1/2x4 1/4	1346	0.105	60-4000	2-3 3/8x5.8	YBL 8041	YBL 8041	3 (Front Drive)	202	327	N	N	7.10	Own	4IH	202	327	None	None	
19	Peterbilt (D) 280	175	175	27000	27000	12500/10.00/20D	6-4	5.5x4	7431	0.540	165-1800	4-1 1/2x16.4	YBL 8041	YBL 8041	12Tm R-230DPA	738	1052	2F	R	9.1-6.51	Tim F-900DPA	W41A	738	1052	68 1/2	10-10 1/2 x 8 1/2
20	280 (coe)	175	175	27000	27000	10000/20	6-4	5.5x4	7431	0.540	165-1800	4-1 1/2x16.4	YBL 8041	YBL 8041	12Tm R-230DPA	738	1052	2F	R	9.1-6.51	Tim F-900DPA	W41A	738	1052	68 1/2	10-10 1/2 x 8 1/2
21	Reo. F-14-1	130	172	14000	14000	4230/6.50/20	6-3	5.5x3	2406	0.182	108-3600	2-1 1/2x10.1	Own	Own	4Tm C-100	294	437	HF	H	6.2-6.8	Int F-360	WG41VH	294	437	65 1/2	8-8 1/2 x 3 1/2
22	F-14-2	130	172	14000	14000	4230/6.50/20	6-3	5.5x3	2406	0.182	108-3600	2-1 1/2x10.1	Own	Own	4Tm C-100	294	437	HF	H	6.2-6.8	Int F-360	WG41VH	294	437	65 1/2	8-8 1/2 x 3 1/2
23	F-14R	130	172	14000	14000	4230/6.50/20	6-3	5.5x3	2406	0.182	108-3600	2-1 1/2x10.1	Own	Own	4Tm C-100	294	437	HF	H	6.2-6.8	Int F-360	WG41VH	294	437	65 1/2	8-8 1/2 x 3 1/2
24	F-14R	130	172	14000	14000	4230/6.50/20	6-3	5.5x3	2406	0.182	108-3600	2-1 1/2x10.1	Own	Own	4Tm C-100	294	437	HF	H	6.2-6.8	Int F-360	WG41VH	294	437	65 1/2	8-8 1/2 x 3 1/2
25	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
26	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
27	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
28	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
29	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
30	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
31	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
32	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
33	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
34	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
35	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
36	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
37	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
38	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
39	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
40	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
41	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
42	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
43	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
44	Owa 255	125	188	17000	17000	4445/7.50/20	6-3	5.5x3	2556	0.189	107-3400	2-1 1/2x10.1	Own	Own	4Tm E-300	340	534	HF	H	6.2-6.8	Tim 30000	LT41VH	340	534	60 1/2	8-8 1/2 x 3 1/2
45	Owa 255	125	188	17000	17000	4445/7.5																				

- The single drive line permits a natural angle and direct lead of the propeller shafts; eliminates excess parts; simplifies maintenance.
- The power divider, of simple design, assures the transmission of power equally to both axles.
- A third differential in the power divider assures equalized power transmission to the driving

- The differential lock between forward and rear axles (optional on some models) is positive in action. With unfavorable road conditions such as mud, snow, and ice, this feature makes maximum traction available when required.

EATON



COMMERCIAL CAR JOURNAL, October, 1953

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For Key to References and Abbreviations See Page v7

(Turn to Page 106, Please)

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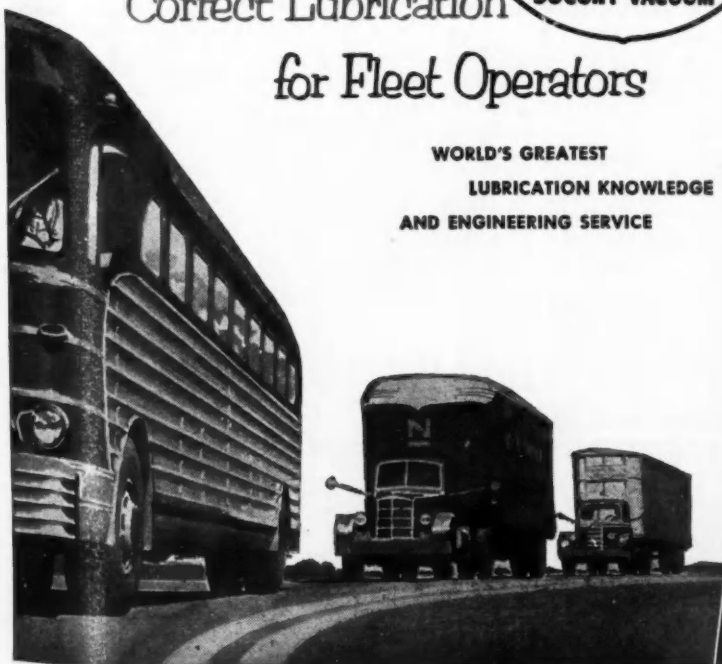
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service laboratories... in short, by
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such a background can surely help increase
the efficiency of all your equipment—
reduce your maintenance costs—
consistently make your operation more
profitable. Why not give him a trial?



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THE FLYING RED HORSE COMPANIES: SOCONY-VACUUM OIL COMPANY, INC., MAGNOLIA PETROLEUM CO., GENERAL PETROLEUM CORP.

COMMERCIAL CAR JOURNAL, October, 1953

Six-Wheelers

Super-Sp
for fast,
automatic
up for fire

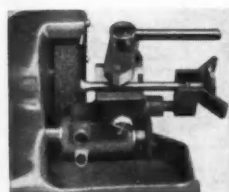
New B&D Valve Refacer Obsoletes all Others for Speed, Accuracy, Low Cost!



More Flexible Capacity built for years ahead! Takes up to 4" valve head, 9/32" to 11/16" valve stems, 0° to 90° valve angles; *traverse* grinds at any angle!



Finest Hypoid Gearing drives workhead spindle giving smoothest grinding finish.



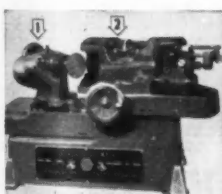
New End Grinding Attachment is extremely quick-accurate and efficient; gives you *everything* you need in one complete package!



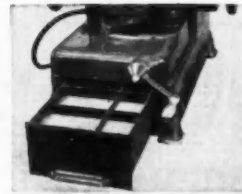
NEW Black & Decker
Deluxe Super-Service Valve Refacer
(Cat. No. 550) **\$385.⁰⁰ Complete**

THIS new Black & Decker Valve Refacer is built for the years ahead, whatever the changes in valve design! It obsoletes *all* existing equipment. It helps you turn out valve jobs faster, gets them right the first time. There are no extras to buy . . . you get everything you need in *one complete package*. And it's loaded with such advanced features as the New End Grinding Attachment, unmatched for: (1) grinding valve stems to obtain exact tappet clearance on Ford type valves; (2) squaring all other valve stems; (3) grinding and truing tappets; (4) grinding and restoring the correct radius to all automotive rocker arms!

See your nearby Black & Decker Distributor for a demonstration. Write for detailed information to: **THE BLACK & DECKER MFG. Co., 624 Pennsylvania Ave., Towson 4, Md.**



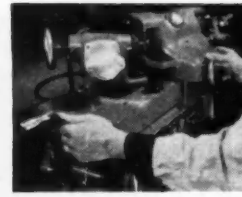
Smooth, Abundant Power developed by two B&D universal motors, independently driving collet and wheel spindles.



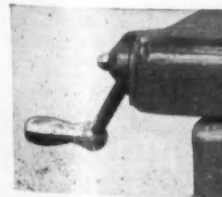
New Coolant System features wet grinding at both valve and attachment wheels, simplified one-valve control, improved coolant reservoir.



Quick-Acting Collet Clamp holds valve perfectly in line for factory-accurate grinding.



Simplified Controls improve skill of operator; free from complicated adjustments and "gadgets," tubes or wires.



Super-Speed Feed Screws for fast, accurate work; automatic end play take-up for finer finish.



4-Point Bearing Suspension for smooth, easy work table travel, greater accuracy.



[illegible]

(Turn to Page 110, Please)

Simplify servicing with greater ingenuity. The new power window and door actuators make steering, brakes, without a general has

FREE



Gasoline

1994

1

Common



The *Lug*

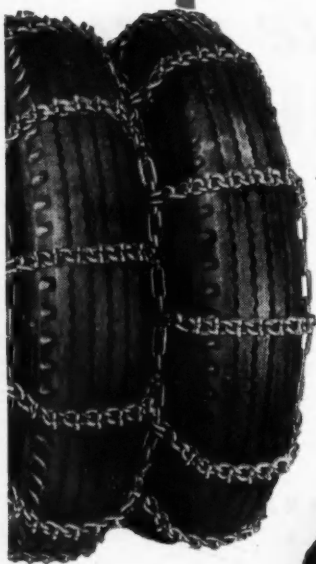
makes the difference...

CAMPBELL Lug-Reinforced TIRE CHAINS

Lug-Reinforced Construction, a patented feature which only CAMPBELL offers you, makes a big difference in your operating costs per mile.

Extra metal in Campbell Lugs means extra mileage, cuts link breakage to a minimum. The lugs dig in for greater traction on ice and snow . . . greater protection against dangerous skids and side slips. You get going, keep going and stop safely.

Be sure each unit in your fleet has Campbell Lug-Reinforced Tire Chains —before the snow flies. Call your jobber or write direct.



Campbell Truck and Bus chains, for every size and every type of service, are packed in durable color-coded bags for easy storage and quick identification.

CAMPBELL CHAIN Company

MAIN OFFICE: YORK, PA.

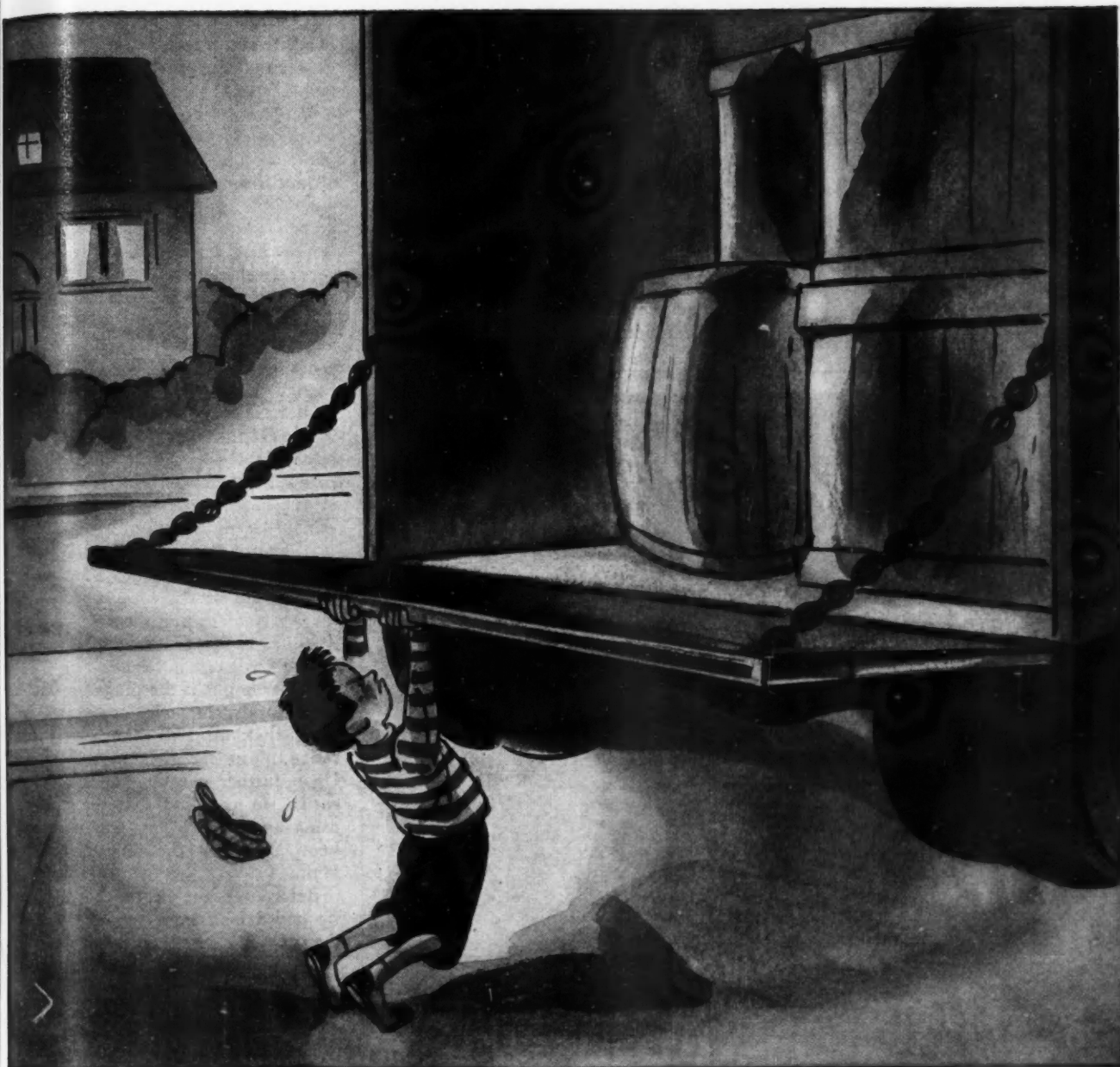
West Burlington, Iowa; Portland, Oregon; Sacramento, Calif.

Chain for every need...industrial...farm...marine...automotive



(Continued from Page 108)

Line Number	MAKE AND MODEL	WHEEL-BASE		Chassis Weight (See definition)	TIRE SIZES		ENGINE DETAILS	TRANSMISSION		REAR AXLE		FRONT AXLE	BRAKES				Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Don't send a boy to do a man's job!

The job is way over your head, Sonny! You need a man's stature, a man's strength for that!

That goes for motor oils, too. Lubricating the engines of hard-working trucks and buses calls for man-sized Phillips 66 Heavy Duty Motor Oil!

This tough oil, made from high-quality crudes, is able to withstand terrific temperatures, to stay on the job on long, hard runs. Specially processed by "cold fractionation" . . . no deterioration from

overheating. Exceptional lubricating "goodness" plus specially tested additives to disperse sludge and carbon and to guard against corrosion, foaming and acid action.

For full information on how Phillips 66 Heavy Duty Motor Oil actually saves money on repairs and overhauls, ask to have a Phillips lubrication engineer call on you.

PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA

Oil for the Engines of Commerce



PHILLIPS 66 HEAVY DUTY MOTOR OIL

COMMERCIAL CAR JOURNAL, October, 1953

111

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Traveling Records Carry Full PM Story

Continued from Page 83

tune-up, spark plug service, distributor and ignition coil data. The sixth card shows when the generator, voltage regulator, starter and battery were replaced. Card number seven covers engine, valves, radiator and hose replacement. Card number eight covers front end, steering gear and spring service information.

Card number nine covers the front end alignment record. Card number ten is for the clutch, transmission, differential and drive-line overhaul.

Card number eleven covers the electrical system starting with the make, the voltage, the ignition coil number; the generator number, capacity, voltage register number; starter number; bat-

tery group number; starter cable length; ground cable length; distributor number; breaker point number; point setting; timing; torque cylinder head; manifold; spark plugs; gap spark plugs; set valves—exhaust, intake; cooling system capacity; percent of antifreeze for zero; crankcase capacity, qts; summer and winter SAE; make oil filter; filter element number.

The last card in the file contains general vehicle data.

It is the mechanic's duty who handles work on the unit to fill in the data on these cards. Before the file containing the cards is returned to its carrier box in the truck or trailer or tractor, it is the shop foreman's duty to check the cards which have been posted by the mechanic against the repair order to make sure that all operations have been reported before the vehicle leaves the shop.

Likewise, the shop foreman and the mechanic are instructed, before performing any service on a unit, to check the last mileage and the date and make a study of the general data furnished before the work is begun.

For example, if the plugs have fouled prematurely, in some cases this indicates that we have the wrong heat-range plugs for that particular unit. Upon further checking of the two top cards, we may find that the engine is using an excessive amount of oil. We know then that the plugs are not at fault.

Before we put in the card system, we had a long form "cry-sheet" which the driver carried in his cab. This

(TURN TO PAGE 114 PLEASE)

Fleet Safety Patrol



A fleet of nine new courtesy cars has been put into operation by Pacific Intermountain Express Co., Oakland, Cal., on all sections of its routes from San Francisco and Los Angeles to St. Louis and Chicago. They are especially equipped with first-aid kits, blankets, fire-fighting equipment, flares, tow cables and other safety and repair equipment. The courtesy cars are driven by specially selected district supervisors who are responsible for seeing that the company drivers operate in conformance with all highway regulations as well as company safety and courtesy rules. They also render assistance to motorists in distress along the highways.

COMMERCIAL CAR JOURNAL, October, 1953



AIRTEX WATER PUMPS

THE NEAREST THING TO MECHANICAL PERFECTION

On this special test equipment, AIRTEX Water Pumps taken from regular production are subjected to as much as 920 hours of continuous operation—under conditions far more strenuous than actual use. In addition, every pump is pre-run at operational speed before final inspection . . . then vacuum-tested at more than twice normal pressure for positive leakproof protection. Rigorous tests like these prove the endurance of AIRTEX Water Pumps to guarantee your customers longer-lasting, trouble-free service!

ORDER FROM YOUR JOBBER—OR WRITE DIRECT

Write for your FREE
Wall-Application
Chart and Self-Stick-
ing Interior Displays.

AIRTEX AUTOMOTIVE DIVISION

FAIRFIELD, ILLINOIS

World's Largest Independent
Fuel Pump Manufacturer

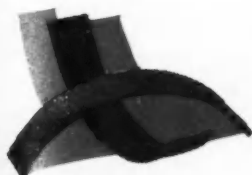
IS LIFE-OF-CAR BRAKE LINING HERE?

Can Auto Users Expect 50,000 to 100,000 Miles?

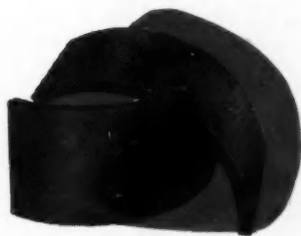
Can Brake Mechanics NOW Guarantee 40,000 to 50,000 Miles?



MOUNTAIN MASTER BRAKE LINING TEST—44,451 MILES—
1/3 WEAR TEST CAR: Chrysler 1950 "TOWN & COUNTRY."
 Original thickness of lining above rivet heads .125 illustrated by shoes 1 and 3. Average wear .042 or 33 1/3% after 44,451 miles, illustrated by shoes 2 and 4. LIFE EXPECTANCY with same wear factor 120,000 miles. Those are facts—not fiction.



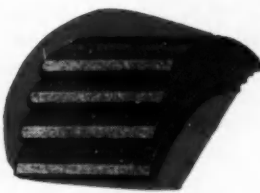
BONDING BLOX



DRILLED SEGMENTS



BONDED SHOES



DRILLED BLOX

The tremendous and ever increasing demand for LASCO SUPER BLOX brake materials, in spite of higher prices, over a period of 10 years has testified to the superior quality over all others in performance and economy

NOW COMES THE PROOF from all sides that LASCO SUPER MOUNTAIN MASTER TYPE LASTS from 50 to 100 thousand miles on 90% of all automobiles—and even that tremendous mileage is by no means the limit.

SEE BRAKE SHOES with lining on left, with fractions worn and original thickness of lining. THESE SHOES and LASCO MOUNTAIN MASTER LINING were taken from a heavy 1950 Town & Country Chrysler with 44,500 miles. PLEASE NOTE lining is 1/3 worn out and on this wear basis would run 120,000 miles. Hundreds of similar records are on file and proof will be cheerfully given to any interested investigator.

WRITTEN GUARANTEE ISSUED

No brake adjustment after installation of LASCO SUPER BLOX MOUNTAIN MASTER TYPE in 15,000 miles is common on passenger cars, and LASCO brake shops will hereafter issue mileage guarantees on all SUPER BLOX reline jobs for passenger cars in normal use up to 50,000 miles.

ASK ABOUT THIS PHENOMENAL BRAKE MATERIAL



LASCO BRAKE PRODUCTS CORP., LTD.

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FORT WORTH
910 Florence St.

SAN FRANCISCO
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SALT LAKE CITY
541 So. State St.

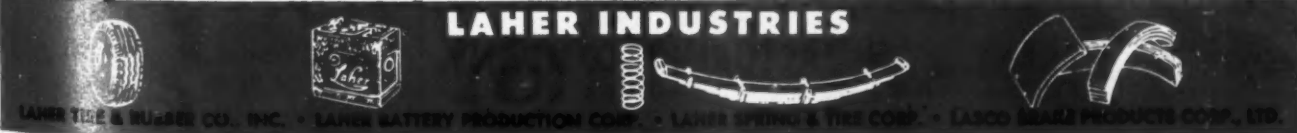
SEATTLE
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PORTLAND
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SPOKANE
1319 W. Second Ave.

SACRAMENTO
1217 - 16th St.

LAHER INDUSTRIES





Side-Dump Bodies

Side-dump bodies made by Easton Car and Construction Co., Easton, Pa., permit use of truck and full trailer or tractor and two full trailer combinations. As illustrated, the trailer is a semi-trailer with converter dolly under the fifth wheel with overall capacity of 28 tons. Depending on the truck's power, payload can be well above 75 tons. Each body is dumped separately by an electric overhead hoist located at the discharge point. Use of the trailer permits a flexibility of operation, allowing greater capacity where conditions permit.

BUY PYRENE

because

Vaporizing Liquid Has Important Advantages Over Other Types for Vehicle Protection



Pyrene® Vaporizing Liquid Extinguishers are the finest all-around extinguishers money can buy—most economical, too. Safe for electrical fires. Effective on oil, grease and other flammable liquid fires. Can be immediately refilled. Special heavy vehicle type 1 qt. and 1 1/4 qt. pump units give at least twice the service life of ordinary vaporizing liquid extinguishers, because they are internally constructed to resist vibration. The 2 qt. and 1 gal. pressure types provide large-capacity protection with finger-tip control. They are unaffected by vibration.

*T.M. Reg. U.S. Pat. Off.

Carburetor, Fuel Line and Tank Fires

Vaporizing liquid provides a much longer discharge stream, making it possible to reach the source of the fire over the spill fire on the ground—from a safe distance.

Electrical Wiring Fires

Vaporizing liquid is a waterless, nonconducting, nondamaging fluid. It penetrates hard-to-get-at locations better than other extinguishing agents and provides smothering and cooling actions.

Tire Fires

If water is not available, vaporizing liquid is the next best bet. It has smothering action and a greater cooling action than other

chemical extinguishing agents. It can also be concentrated in a stream on underbody parts to which fire has spread.

Brake Fires

Vaporizing liquid provides the smothering and cooling actions required here, too. Because of its long delivery pressure, it can easily be directed onto drive shaft fires.

Cargo Fires

Vaporizing liquid—a nondamaging fluid—is more penetrating than all other extinguishing agents, including water. For incipient fires in general cargo, this is important. Long range and effectiveness on flammable fluids make larger, pressure-operated units ideal for tank trucks, too.



PYRENE MANUFACTURING COMPANY

589 Belmont Avenue

Newark 8, New Jersey

Affiliated with C-O-Two Fire Equipment Co.

Traveling Records . . .

Continued from Page 112

"cry-sheet" carried a list of items for the driver to check in case of a complaint or report. Then down at the bottom there were lines ruled off for remarks. We found that the drivers were using the bottom half only. Therefore, we got up a simple form called Drivers Mechanical Report of Equipment. The drivers use these forms and they often cite a card notation in making up their "cry-sheet."

Cut Road Failures

ALL of our gas pumps and lube departments are operated by grade A mechanics. These mechanics give the unit a visual and auditory inspection while they are giving service. Each time the unit is serviced by one of these mechanics, it is the mechanic's duty to check the "cry-sheet" with the driver and also to check the cards on any serious reports on the "cry-sheet."

This mechanic has the authority to pull the unit out of line and route it to a shop when he thinks it is necessary. He also makes minor adjustments and repairs while the unit is being serviced which often prevents a lay-up. Each one of these mechanics is costing us \$38 more per week in salary than we were paying for a gas attendant and grease man. However, we are convinced that we are saving 20 times this amount of money each week in lower maintenance cost and in fewer road failures. Our road failures have been reduced 90 per cent in the past twelve months since we put in this mechanic visual and auditory inspection program.

Besides the general checks, inspections and correction of "cry-sheets" described above, we have a 2000, a 10,000, and a 20,000 mile check-up for each unit in the fleet. These check-ups follow the general procedure at most maintenance shops.

END

Please Resume Reading Page 84

COMMERCIAL CAR JOURNAL, October, 1953

Cold Weather Driving Problems

Continued from Page 86

A number of different types of starting aids have been developed and are in use today with varying degrees of success. These include heaters of both the hot air and immersion type, priming systems employing volatile fuels, flame ignition, and ether-base starting fluids. The hot air-type heater is an effective starting aid, but its use has been limited to military and certain commercial vehicles because of the expense and added maintenance of this type of device. Electric immersion-type heaters are also effective, and their use is increasing, particularly the head bolt heater, a small heater which is inserted in the engine in place of one of the cylinder head bolts and maintains coolant temperatures at relatively high levels. Their use, however, is limited to locations where electric power is readily available. An elaborate starting aid which appeared several Winters ago was a device which automatically started the engine when the coolant temperature reached a given low value. The engine would then idle until the jacket temperatures reached a predetermined high value at which time the engine would automatically be stopped. The general acceptance of this device is not known to the writer.

Of the various starting aids available, field experience has shown ether-base starting fluids to be the most reliable and effective. These fluids were developed as a diesel engine starting aid and are particularly suited to that service. Starting of diesel engines at temperatures below -50°F with the aid of starting fluid is not unusual in the Arctic. Similar spectacular results have been obtained in gasoline engines, although starting fluids are generally not required above -25°F. The use of starting fluids is not limited to subzero operation, as previously mentioned. Diesel engines are difficult to start at temperatures as high as 40°F, and these difficulties can be eliminated by the use of starting fluid. The effectiveness of starting fluid in eliminating these difficulties in diesel engines at relatively high ambient temperatures is shown in Fig. 1. These data were obtained in diesel engines using battery powered cranking motors, and although starting could be accomplished at much lower temperatures with the fuel used if prolonged cranking was possible, as shown in Fig. 2, the lack of availability of cranking power limits the starting tem-

perature to approximately 20°F. Ether starting fluids have also found wide application in marine service and in two-cycle and other engines where starting is difficult because of design, weak batteries or poor mechanical condition.

Ether-base starting fluids can be introduced into an engine in various ways.

The two most common methods of application are spraying the fluid into the manifold through the air cleaner with a hand operated spray gun, or injecting it into the manifold by a priming pump mounted in the vehicle cab. The fluid can also be applied by special carburetor although this method has not been in general use. More recently, gelatine capsules and pressurized steel bulbs of starting fluid have been developed which have improved the ease of application. In the case of the gelatine capsules, the starting

(TURN TO PAGE 120 PLEASE)



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Cold Weather Driving

Continued from Page 119

fluid is injected into the manifold by a priming pump after the capsule has been punctured by a puncturing tool connected to the pump. In the case of the pressurized bulbs, the fluid is injected into the manifold by the bulb pressure when it is punctured in a piercing device mounted in the cab of the vehicle.

Gear Lubricants and Greases

ONCE starting has been accomplished, the major difficulty of Winter driving has been overcome. However, successful operation of the vehicle depends upon free motion of gears, wheels, and other moving parts, and this, in turn, depends upon the temperature at which the vehicle is to be operated and the viscosity of the lubricant used. If lubricants or greases are too viscous at low temperatures, excessive drag results in poor economy and difficult driving, until working

parts reach equilibrium operating temperatures. In extreme cases, mechanical failure results from overloading of parts or from lack of lubrication due to channeling of the lubricant before operating temperatures are reached.

Currently available gear lubricants and greases are adequate for all but the most extreme operating conditions. SAE Grade 80 gear lubricants will perform satisfactorily at temperatures down to -20°F , and Grade 75 gear lubricant is usable at temperatures as low as -40°F . Chassis and wheel bearing greases are also available for these same temperature ranges. These lubricants can be used safely at much higher temperatures provided seals and other mechanical parts are in good condition. The major cause for complaint with these lubricants is excessive leakage which results when they are used with poor seals or other worn parts. Failure on the part of operators to use these winter lubricants, for fear that they will not be adequate if relatively high temperatures are encountered, is the cause of much needless difficulty. Experience has shown that these lubricants, if properly applied to vehicles in advance of extreme cold weather, will eliminate most operating problems experienced at very low temperatures and will provide adequate lubrication at high temperatures.

Winter Operating Problems

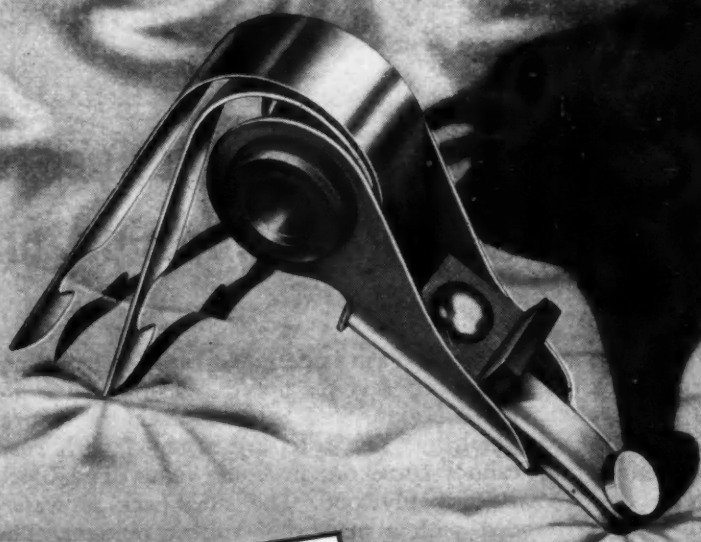
ALTHOUGH the development of winter fuels and lubricants and winterization equipment has reduced cold weather driving problems to a point where vehicle operation is possible at extreme subzero temperatures, there are several problems which occur frequently under these conditions and which are not generally recognized. Failure to recognize these problems causes difficulties which can be avoided and results in unjustified criticism of the petroleum products and machinery involved.

(TURN TO PAGE 122 PLEASE)



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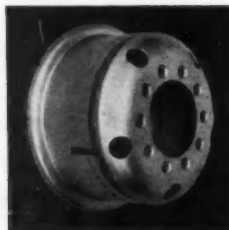
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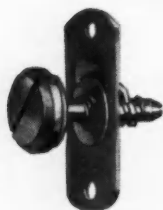
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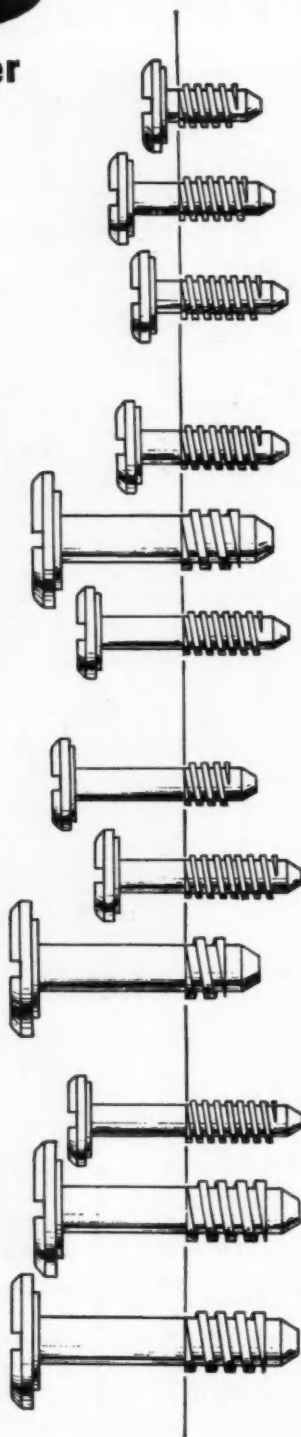
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Cold Weather Driving

Continued from Page 120

One of these problems is spark plug icing, which renders ignition systems inoperative. This occurs at low temperatures after an engine has fired for several cycles during starting, but fails to continue to run. In that case, the water formed during combustion freezes on the spark plug electrodes, causing them to short. Removal of the ice from the plugs is the only solution to this difficulty, and continued attempts to start the engine when plugs are iced only results in rapid battery failure.

Oil pump screen plugging, from either ice or wax, or a combination of both, is another source of difficulty often not recognized even by experienced Arctic operators. This condition prevents oil circulation and often results in bearing failure from lack of lubrication before loss of oil pressure is noticed. Experience has shown this to be a common cause of bearing failure which operators often associate with the use of low viscosity crankcase lubricants. Again, as in the case of spark plug icing, the application of heat is the solution to the difficulty once icing has occurred. Frequent oil drains during winter operation will reduce the amount of water in the crankcase and will minimize the occurrence of oil screen icing.

A more unusual and less frequent failure is piston seizure because of liner distortion. This occurs when cold coolant from the radiator comes in contact with the cylinder liner when the thermostat opens after a long period of light load operation. When an engine is operated at low temperature under light load, the thermostat remains closed in order to maintain jacket temperature, and the coolant trapped in the radiator approaches ambient temperature. The thermostat opens if the jacket coolant temperature becomes excessive and cold water circulates around the bottom of the hot liner. If the temperature difference is large, the liner shrinks measurably at the bottom and the piston seizes at bottom dead center. Such failures are not uncommon in trucks and tractors operated in the Arctic, and in most cases the failure is blamed on faulty lubrication. The difficulty can be eliminated by the use of radiator blankets which help to maintain a more even temperature throughout the entire cooling system, or by alteration of the cooling system piping to permit circulation in the radiator at all times.

END

Please Resume Reading Page 87

COMMERCIAL CAR JOURNAL, October, 1953

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A Look At Alternator Systems

Continued from Page 87

Comparison between the d.c. and a.c.-d.c. system performance installed on our vehicle is shown by figure 1. This combined performance curve of the a.c.-l.c. system output and the d.c. generator output versus engine RPM, has the following limitations: The belt ratio for the d.c. generator is $1\frac{1}{2}$ to 1 and the alternator system ratio is 2.25 to 1.

Let's assume the engine will operate from 500 RPM idle to 3200 RPM. The belt ratio of $1\frac{1}{2}$ to 1 for the d.c. unit is the highest we can use for this drives the generator at 4800 RPM when the engine is running at top speed. Under the same condition the alternator is turning at 7200 RPM which is well below the maximum speed of this unit.

Higher ratios could be used to drive the alternator and obtain more output at idle but would require special pulley sizes, not commonly found on automotive engines. It is interesting to note that at the 500 RPM idle speed, the alternator delivers 30 amperes to the load while there is nothing available from the d.c. generating system. Full load from the a.c.-d.c. equipment occurs at 580 engine RPM and for the d.c. unit at 1270 RPM.

Load Analysis Calculations

THERE are as many electrical load problems as there are makes and models of vehicles. The following data are to illustrate the problems and the types of answers that are obtained rather than represent calculations on any particular truck. It is very difficult to estimate the average charging current which would be taken by the battery over a given cycle of operation. The ratios selected between maximum load conditions and generator rating are empirical. They provide a safety factor and capacity for charging the battery. Let's define our problem as a truck that may be operated over a 10 hour cycle under its heaviest load condition in first, intercity service and then second, heavy traffic of a big metropolis. Operational studies on trucks and busses have shown idle performance to vary from 20% for driving in the country to 60% when driving in a large city. For example, New York City has a bus route that experiences 70% idle time during each round trip. The load analysis calculations are made easiest when charted as shown in table 1. This chart was set up with the steady loads first in order to make it easy to compare the load amperes against the generator rating and illustrates how small the total load is influenced by intermittent duty devices shown in table 2. It is always difficult to estimate the percent of operational time for intermittent loads but it should be realized that considerable error may be introduced at this point without seri-

(TURN TO PAGE 126 PLEASE)



"Go left 27, right 8, left 12, and right 17!"

COMMERCIAL CAR JOURNAL, October, 1953



CLAW TIRE CHAINS

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The bigger the fleet the sharper the eye kept on road schedules and operating costs. Fleet operators with plenty of experience in buying and using tire chains tell us CLAWs not only keep their cars and trucks moving in "rough" weather, but they also stand up under the continual pavement-pounding.

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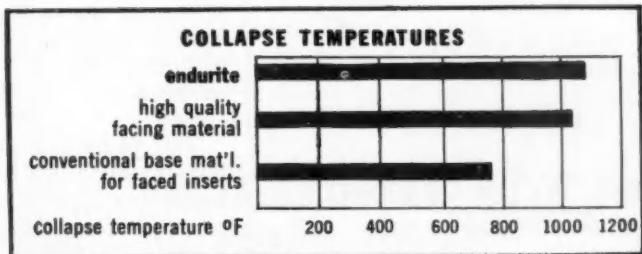
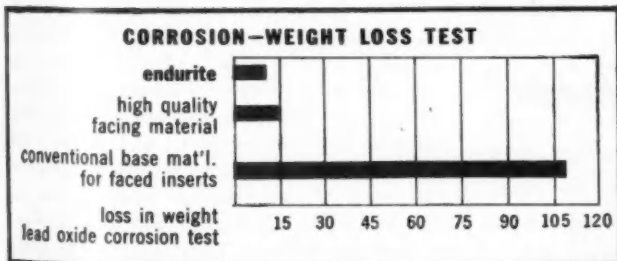
VALVE SEATS made of Endurite *stay* tight in the cylinder head or block. They also permit more regrinds, since it is not used as a facing only—the *entire seat* is Endurite.

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These charts indicate Endurite superiority over other types of materials used in valve seat insert manufacture.



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SPECIAL PRODUCTS DIVISION

Alternator Systems

Continued from Page 124

ously affecting our results. We suggest that calculations be on the conservative side in order to be sure of reliable performance.

Comparing the 35 amperes continuous load to $\frac{3}{4}$ of the rating for both the d.c. generator and the alternator system, we see that they should handle the load on our truck. The d.c. gen-

erator operating in the country on a 10 hour cycle would develop 400 ampere hours of 320. This is more than the 316 ampere hours load requirement. The city operation with its high percentage of idle time reduces the total ampere hours generated to 200 for the d.c. generator. This would permit only 120 ampere hours load without discharging the battery. These calculations show that the d.c. generator equipped truck in city service would require several cycles of recharging the battery during winter operation. A graphical picture of the ampere hour

comparison is shown in Fig. 2. This clearly shows the excellent performance of the rectified a.c. equipment.

Weight and Relative Cost

The weight of the d.c. generator and regulator equals 47.5 pounds, this compares to 34.25 pounds for the a.c.-d.c. equipment. The trend today, towards lightweight vehicles carrying heavy payloads shows the alternator system to be at an advantage compared to the other equipment. Relative cost between these two systems favors the d.c. generator. At the present time, the initial cost for the a.c.-d.c. equipment is running 50% greater than the d.c. generator. This difference will decrease as production rates increase for the wide speed range rectified a.c. system. Bus applications of lightweight alternator equipment are directly competitive in cost and performance with the heavier d.c. systems.

Conclusions

The data presented illustrates the fact that the "Rule of Thumb" comparison of amperes load to generator amperes does not assure our customers of trouble-free service and fully charged batteries. It is very difficult with this type of load analysis to include any estimate of the intermittent duty loads and their influence.

The ampere hour system of load analysis includes the intermittent duty loads and the variation of performance in electrical system between idle and full load performance. Occasionally, greater accuracy may be required in analyzing the load. Under these conditions, a comparison may be made between the ampere hours discharged from the battery during shut down and starting with the 20% ampere hour safety factor in the generating system. These calculations may indicate during the design stage that a system with greater capacity is needed for trouble free service. The differences in size, weight, and initial cost are always important factors in selecting automotive electrical equipment, but these are small problems compared to the trouble borne by the operator when he has to tie up his equipment due to electrical system failure. The variation in commutation with changes in load and speed will always require several commutator resurfacing and brush replacing overhaul periods compared to one overhaul cycle for the alternator equipment.

This paper indicates there will always be applications for the d.c. generator but gives a method by which you can choose with confidence.

END

Please Resume Reading Page 88

COMMERCIAL CAR JOURNAL, October, 1953



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- FASTER REFUELING
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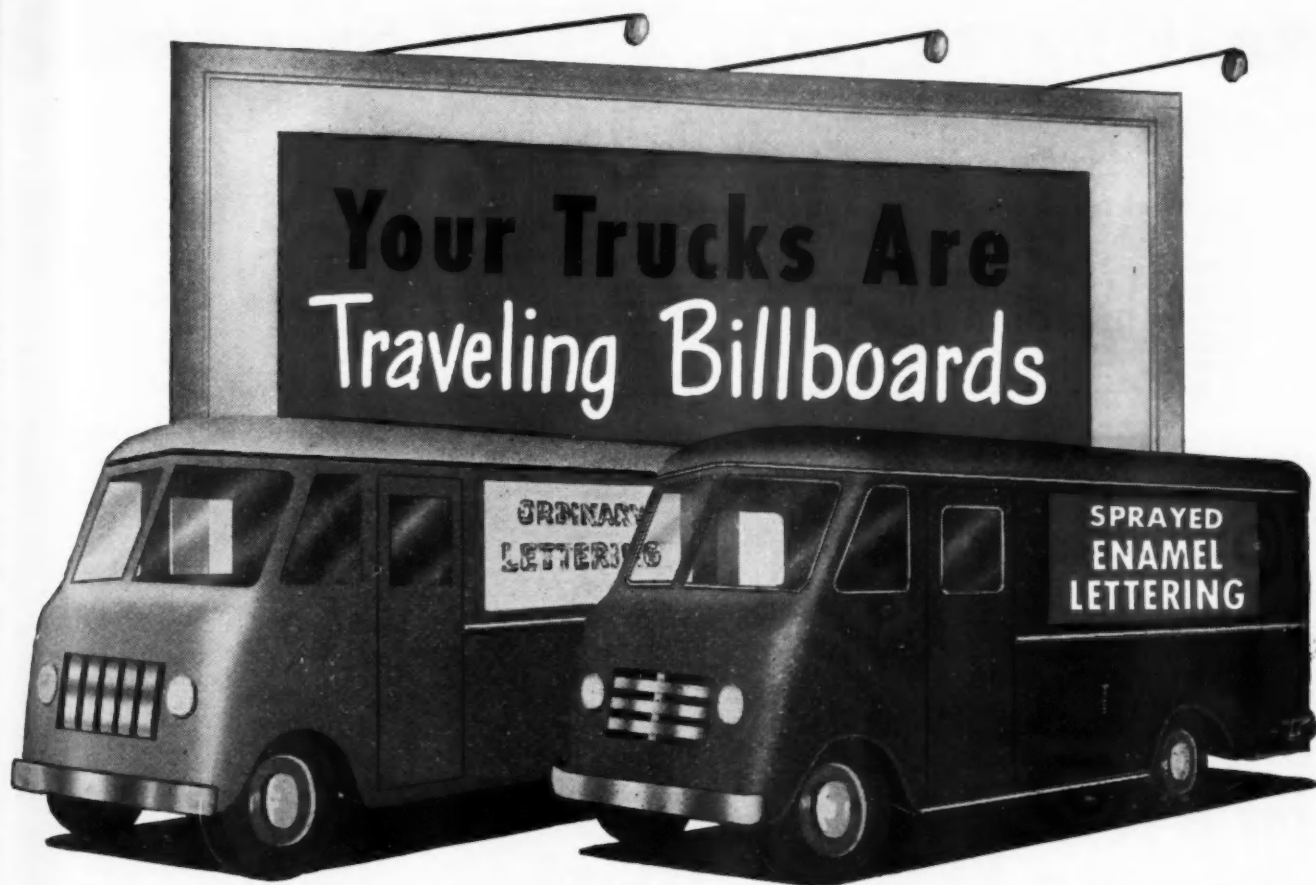
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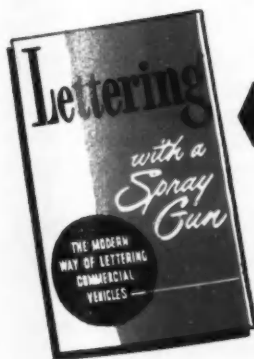


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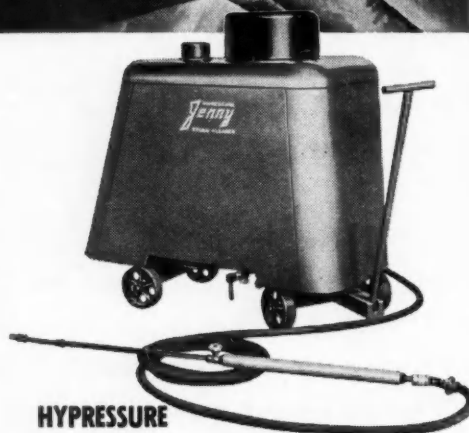
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5 International	2:13	1:32	2:20	2:30	1:24	3:24	\$2.50 current		Bronze
10 Mobile	3:00	1:09	1:14	2:26	1:21	1:23	14 1/4 gal gas	101 1/2 gal	Gold
11 Knox	1:25	1:10	1:00	1:24	1:10	1:07	10 1/4 gal gas		Gold
12 Knox	2:09	1:12	1:16	2:09	1:21	1:25	8 1/4 gal gas		Silver
14 Blaisdell	Withdrawn on first stage.			Caught fire; hand pump too quickly and reversed, tire came off, truck upset on Broadway.			lever broke, bent crankpin.		
2 Union	5:43	2:08	Stopped	8:09	4:43		900 lb. coal	852 gal	Gold
3 Union	3:12	2:40	4:22	3:13	1:42		410 lb. coal	332 gal	Gold
9 Morgan	6:29	2:52		8:56	1:32		1335 lb. coal	869 gal	Gold
7 Columbia	3:56	2:35		3:13					
1 Coulthard	5:19	1:48							
6 Columbia	Developed leaky boiler, failed to finish.								

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Certainly not! Neither would you continue to use slow, laborious hand methods to clean your vehicles... shop equipment... lifts... pits... floors and driveways, if you knew that it is costing you 10 times as much as it should!

One of your men, using Hypressure JENNY can clean more—better—in a single hour than 10 men can accomplish in the same time by solvent-brush-and-scraper methods. This means that Hypressure JENNY can SAVE 90¢ OF EVERY DOLLAR you now spend fighting dirt, oil and grease.

Think it over! Then ask us to prove it. We can—and will—without obligation.



HYPRESSURE

Jenny

STEAM CLEANER

Write today for FREE copy of "1001 WAYS TO EXTRA PROFITS WITH HYPRESSURE JENNY." For local Jobber see Yellow Pages of Telephone Book.

HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING COMPANY

"Serving Since 1892"

P. O. BOX 90

CORAOPOLIS, PA.

Special Stamp

Continued from Page 67

only 11 contestants actually took part. Of these, six were steam vehicles, four gasoline, and one electric. Details of the vehicles, their performance, and the official results are shown in the accompanying charts.

Results of the Contest

The test was conducted in two phases: a non-stop journey on the first day and an elaborate series of stops and starts on the second day.

The route, as laid out, called for a trip over the same ground both days. From the ACA clubhouse, at Fifth Avenue and 58th Street, the wagons and trucks went across the plaza and along 59th Street to Central Park West, to 110th Street, to Amsterdam Avenue, to Kingsbridge Road and Broadway to 230th Street. There the return trip began by way of Bailey and Sedgwick Avenues, to Fordham Road over to Jerome Avenue, and along it to the Central Bridge; then down Seventh Avenue to 135th Street over to Fifth Avenue, and straight down Fifth Avenue, with the necessary detour at Mount Morris Park, and again between 86th and 79th Streets, where Park Avenue was used, to the clubhouse. That ended the first stage of the journey, 20 miles, and a stop of 45 minutes for luncheon was then compulsory upon all.

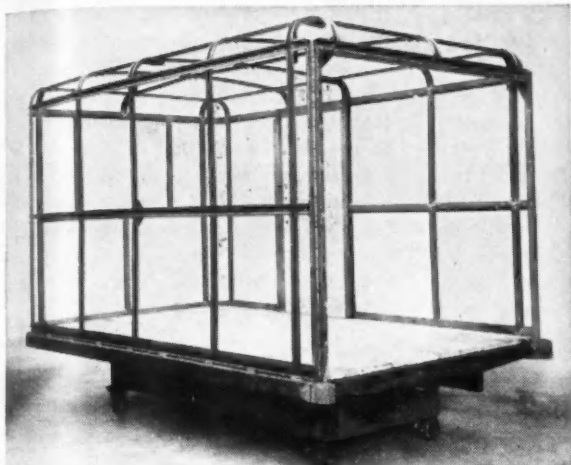
The second stage of the journey began at the clubhouse, led down Fifth Avenue to Broadway and direct along Broadway to the Battery; from there the return was made by way of West Street, to Laight Street, to Canal Street, to Broadway, and then straight back to the clubhouse by the same route as was covered going down. This com-

(TURN TO PAGE 130, PLEASE)

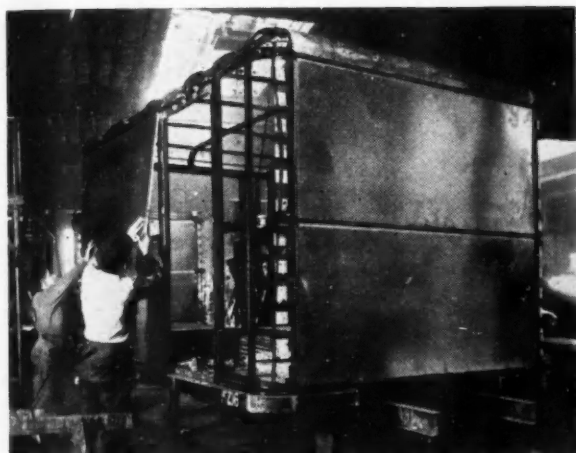


"This is the last economy run we ever volunteer for!"

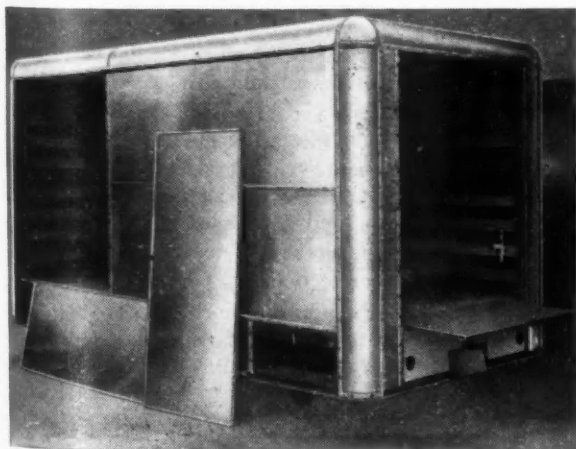
SAVE MONEY YEAR AFTER YEAR and get all these Advantages



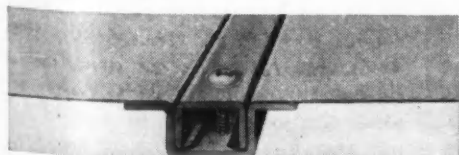
Sturdy framework is assembled from standardized LS components to exact body size and style you need.



Accurately die-formed LS components make it possible to build tailored bodies by production line methods.



Pre-tensed LS panels give body rugged strength—provide attractive, smooth exterior. If damaged, parts can be quickly replaced from outside.



FUNCTIONAL DESIGN
FAST REPAIR **LONG LIFE**
**in a Truck Body Tailor-Made
of LINDSAY STRUCTURE**

You can save money year after year with a functional Lindsay Structure truck body *built for your job*. Here is why—

First, you get the operating efficiency of a body tailor-made to give you profitable pay load...afford your drivers the easiest and quickest handling of your particular type of cargo.

Second, you get the benefits of the patented LS method of construction—light weight with great strength, rugged durability, ease-of-repair and long life.

Fleet operators tell us their records show that Lindsay Structure is the lowest cost truck body on the market today—figured on an over-all basis.

For efficient, low-cost operation equip your next truck with a Lindsay Structure body in **steel or aluminum**—it will be one of the best investments you ever made.

There are over 200 LS body manufacturers in the United States and Canada to serve you. Or, if you prefer, we will gladly work with you and the manufacturer of your choice. For descriptive folder or data on LS fleet service, write—

These Advantages Can Save You Money

FUNCTIONAL DESIGN
LS truck bodies are tailored to your exact needs—designed to give you maximum operating efficiency at minimum cost.

FAST REPAIR
If damaged, LS sections can be quickly replaced from the outside—most replacement parts are stocked by LS body builders.

LONG LIFE
LS bodies have rugged durability to withstand hard wear. Many LS bodies are now on their fourth or fifth truck chassis.

LINDSAY
STRUCTURE

Lindsay Structure, Inc.
5000 West Dempster St., Skokie, Illinois

U. S. Patents 2017629, 2263510, 2263511
U. S. and Foreign Patents and Patents Pending

Special Stamp

Continued from Page 128

pleted the second stage of the run, ten miles, and the vehicles of the fourth and fifth classes were then finished, having covered 30 miles.

The first, second and third classes had to make a third stage by going to the Battery and back again in order to complete 40 miles. There was a com-

pulsory stop of ten minutes between the second and third stages.

Stations for renewing water supply had been arranged along the route by the committee, and these were designated by green flags.

The classifications as laid out by the rules were as follows: First Class, to carry 750 lb; Second Class, to carry 1500 lb; Third Class, to carry 3500 lb; Fourth Class to carry 6000 lb; Fifth Class, to carry 10,000 lb; Miscellaneous Class, to carry dead load of 50 per cent of weight of vehicle.

It was the aim of the contest com-

mittee to gather data from which to calculate the operating cost of each vehicle during the contest. To this end the observers were required to record the time taken in raising a working pressure of steam from "all cold," to note the consumption of fuel, to see that the load impost was not varied, to note the exact time of start and finish, the duration and purpose of stops, to note the steam pressure at stops and the condition of the fire, where coal or coke was used. The medal awards were then made according to the performance of the units.

END

Please Resume Reading Page 68

Competition Ups Lift Truck Safety

HERE are the detail of an unique fork lift truck driver competition that has spelled increased safety at American Finishing Co., Memphis, Tenn. It has also been responsible for decreased operating costs and equipment maintenance charges.

Each truck is assigned to a certain driver. If he is caught handling his equipment in a rough manner, or damaging material with his equipment, he is warned. The second offense means a one-day layoff. The third offense demands a one-week layoff. The fourth offense automatically calls for discharge. The second or third could conceivably call for discharge, if the extent of the damage or the employee's attitude warranted it.

When the company receives a new truck, the selection of the driver is contingent upon his safety record and his cost record of truck operation. In assigning the new equipment to the driver, the company points out the reasons for his selection.

Proof of the success of the operation: competition is so keen for a truck job, that it takes five years to become eligible.

Operators are enthusiastic about the competition, and the company finds costs have tumbled. For example: the cost of operation of a single truck for an entire year, including amortized cost of the truck, is only \$1,358.94. In addition, it must be realized that this equipment runs in some departments during three 8-hour shifts, bringing down the average cost to \$452.98 for one year for one 8-hour shift per day.

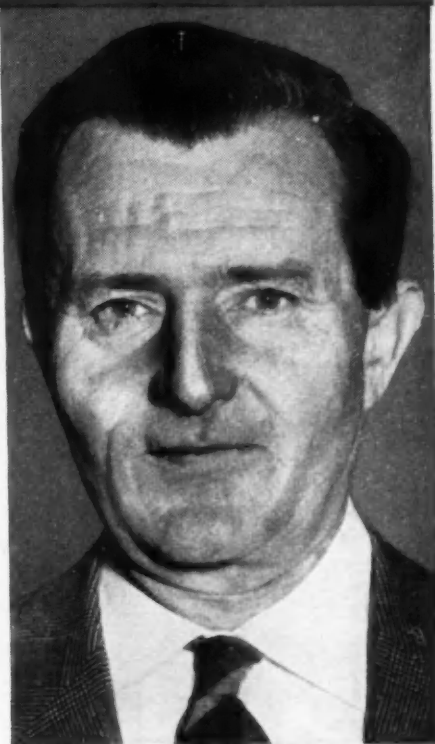
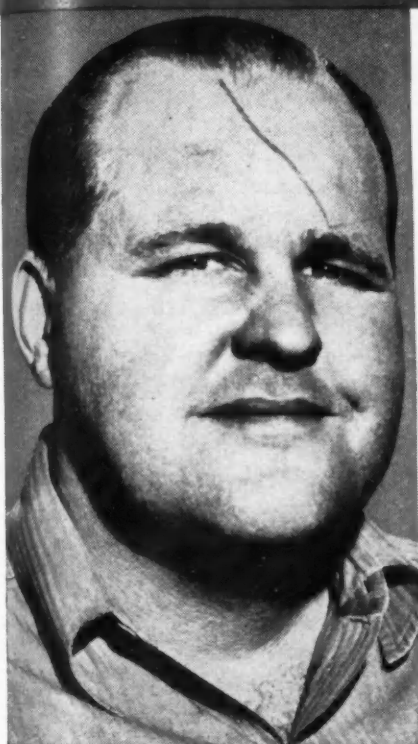
AMMCO makes them all!
engine repair, brake service
and honing equipment

The Complete Line
is available from your AMMCO jobber

Play Safe with Ammco...The Big Buy!
AMMCO TOOLS, INC.
2118 COMMONWEALTH AVE. • NORTH CHICAGO, ILL.

Tools and Equipment shown:
WET HONING MACHINES
BRAKE GAGES
BRAKE CYLINDER HONES
SAFE-ARC BRAKE SHOE GRINDERS
DRY HONING MACHINES
CONNECTING ROD ALIGNERS
TAP-ROCK GRINDERS
SAFE-TURN BRAKE DRUM LATHES
TORQUE WRENCHES
PIN VISES
PORTABLE COOLANT UNITS
SMALL BORE HONES
CYLINDER HONES
BRAKE CYLINDER SURFACING HONES
LINE BORING MACHINES
RIDGE REAMERS
BRAKE DRUM MICROMETERS
CYLINDER SURFACING HONES

3 Reasons why pre-mixed Du Pont "ZERONE" or "ZEREX" anti-freeze cuts cost, saves you time



1. Save as much as 1/3 in amount of anti-freeze used!

"A large part of our fleet runs at night, and at several of our smaller terminals we do not have service attendants. Therefore, we have to rely on drivers servicing their own equipment; with pre-mixed Du Pont anti-freeze we know they are safe and have uniform protection. Also, we have saved as much as 1/3 in the amount used." *John Buckley, Shop Foreman, Melvin Trucking Co., Peoria, Illinois.*

2. Eliminates use of time-consuming hydrometer check!

"We find that pre-mixed Du Pont anti-freeze saves a lot of guesswork, saves waste of anti-freeze. Pre-mixing also saves time by eliminating use of hydrometer for continual checking—when coolant level drops, we merely add pre-mixed Du Pont anti-freeze. Savings in anti-freeze are effected, as it is not necessary to 'overprotect' the cooling system." *Christian A. Oswald, Maintenance Supervisor, Peter P. Ellis Co., Detroit, Michigan.*

3. Pre-mixed Du Pont anti-freezes are great time savers—money savers, too.

"'Zerone' and 'Zerex' are used for winter protection of all our 2,000 trucks. They give complete protection against rust and corrosion. Pre-mixed Du Pont 'Zerone' or 'Zerex' anti-freeze are great time savers—money savers, too. Tests with the hydrometer are done away with." *Harvey H. Earl, Superintendent of Motor Equipment, United Parcel Service, New York, N. Y.*

This is what pre-mixing is . . . Both "Zerone" or "Zerex" mix completely with water in all proportions. Since their special Du Pont chemical rust inhibitor won't separate from the solution while standing, you can make up a pre-mix of properly proportioned solution of each, and keep it constantly on hand to replace cooling system losses. Actual tests prove that such losses are of the anti-freeze and water solution, not anti-freeze alone. Losses should not be replaced with concentrated anti-freeze. With a pre-mixed solution, anti-freeze needs can be gauged exactly—costly overprotection is avoided.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

The Warner Electric Brake

Continued from Page 79

An interchange panel makes it possible to use electric brakes on trailers in a fleet without equipping all tractors with electric brake controllers. Air—or vacuum—actuated controllers are mounted together with a quick release valve in trailer electric brake circuit. Air or vacuum power is received from

tractor through normal trailer couplings.

This brake is presently available (optional equipment) on any make trailer. Because it is adaptable to standard axles, wheels and hubs it may very simply be installed on existing equipment. Installation of brakes, controll-

ers and wiring can be done by any mechanic in a short period of time. Because of the armature mounting in the drum, replacement with electric brake drums is required in conversion. One method of converting a fleet uses an interline panel which is mounted on the trailer. The electric trailer brakes are synchronized with the air brakes through the air control equipment on the tractor. Thus there is no driver training problem as operation is identical to that of an air brake equipped trailer.

Advantage of the electric brake installation is given as this:

1. Synchronized operation of trailer brakes with those of tractor.
2. Elimination of time lag between actuation of tractor brakes and brakes of the trailer, due to faster and more controllable response of electricity over air or fluid.
3. The double safety of two independent braking systems.
4. Danger of depleting the air supply over long periods of braking is reduced to a minimum because the use of air-actuated electric brakes requires for the entire tractor trailer unit only about one-fifth the amount of air required to actuate straight air brakes on both tractor and trailer.
5. Reduced service and maintenance. There is no adjustment on the electric brake. Inspection periods, however, should be set up on a similar mileage basis in the interest of safe operation.

END

Please Resume Reading Page 80

**ONE MAN . . .
AND A
BRADEN WINCH**



Pictured here is one man and a BRADEN WINCH doing an efficient job of pole setting. The controls are placed so that the operator can see the pole and keep the load under perfect control. This is another example of the adapting of a BRADEN WINCH to specific handling jobs. Let us know your handling problem and we will show you how a BRADEN WINCH can be used to solve it.

Write for complete information

BRADEN WINCH COMPANY
P. O. Box 547, Broken Arrow, Oklahoma



"Have you seen Harry? He's coming as a garage mechanic!"

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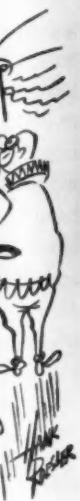
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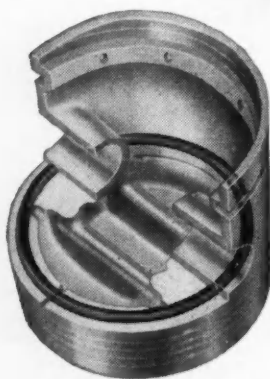
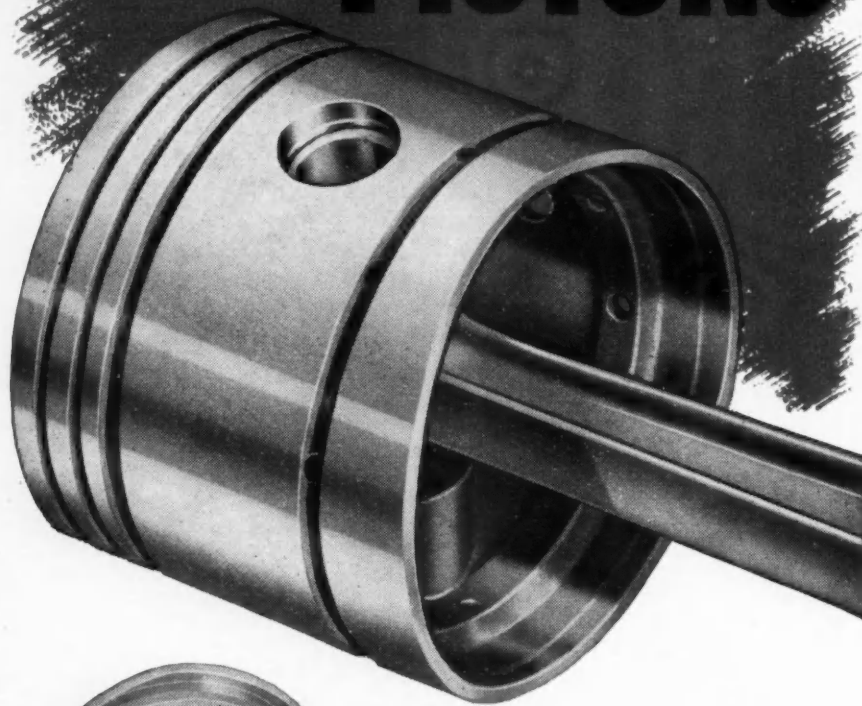
ber, 1953



STANDARD OIL COMPANY (Indiana)

ENGINEERED FOR THE JOB

TOLEDO PISTONS



A COMPLETE LINE OF FIRST LINE PISTONS FOR PASSENGER CARS, TRUCKS, BUSES, TRACTORS

With the Toledo line of pistons you can furnish pistons the same as original equipment, or you can furnish a type to overcome a particular problem. The three Toledo types — Diatrol, Factory Duplicate and Aerotype — are all first line pistons. They are First in Quality, First in Performance, First in Customer Satisfaction.

TOLEDO PISTON PINS

Toledo Piston Pins are packed in matched sets. Accurate, easy pin fit is assured. For longer-lasting, smoother performing overhaul jobs, use Toledo Piston Pins.



The TOLEDO
STEEL PRODUCTS COMPANY

TOLEDO, OHIO
Division of Thompson Products, Inc.
Since 1906 — World's Finest Automotive Parts



Higher Shop Output

Continued from Page 81

penter shop for ease of materials handling. Iron angles are introduced to act as rails for the fibreboard trays which are now used to load loaves of bread. The improvements reduced driver's loading time from $\frac{3}{4}$ of an hour to 5 min per truck. Moreover, customers find that bread arrives in fresher state with this unit-load system of handling.

Another device conceived in this Wonder Bakeries' garage, which has simplified the driver's routine, is the special type of sliding door which operates without ball bearings. Drivers found that ball bearings often created hardships in Montreal's frosty temperatures. Frost-stuck doors became difficult to budge and a driver would report in worn out at the end of the day.

Wonder's solution involves a piece of steel channel used as a slide plate about 1 in. wide by $\frac{3}{16}$ in. thick by 24 in. in length. Along this channel runs a simple arm fastened to the door. The arm is about 2 in. wide shaped from $\frac{1}{8}$ -in. thick flat iron. For year-round smooth operation of the doors, all that is needed is grease in the base of the channel once a month.

Two fully-equipped spray booths keep the light-colored trucks with the 3-dimension bread illustration looking gleamingly new. A highlight of the paint chambers is their efficient exhaust system. It pays to invest in a good, large exhaustor that pulls the fumes out so fast they can't do any harm. A man can spray in these booths without wearing a mask.

END

Please Resume Reading Page 82



"Notice that guy we just passed? I repaired his truck last week!"

COMMERCIAL CAR JOURNAL, October, 1953

Driver Breakfasts Point Up Safety

TO its basic program of driver selection, testing and training Automobile Shippers, Inc., Detroit, has added bi-weekly Safety Breakfasts as a means of continually stressing safe driving practices. Since the program began in 1947 the company has reduced its accident rate by almost 90 per cent.

The breakfast meetings are held every other Monday. Most of the drivers attend, although the meetings are



not compulsory. Household appliances are given as door prizes to attract the attention and support of the drivers' wives.

The idea of the meetings stemmed from the company's desire for a medium to establish contact with drivers and meet them on a common ground. At the same time they have been found to serve as a useful means of continual safety instruction. Each session includes a talk or film followed by a discussion period during which the drivers are encouraged to state their own opinions.

Here's how the program has paid off: In 1947 the company had an accident rate of 3.58 accidents per 100,000 vehicle miles of travel. By 1951 the rate had dropped to .71 and in 1952 it was further lowered to .396 to lead the



15 companies in the National Automobile Transporters Association. In May of 1952 the drivers recorded 26 days and 1,180,664 miles without an accident to establish a new record of safe driving within the company.

Approximately 300 drivers cover 1½ million miles per month for the company.

MADE TO LAST LONGER TOLEDO BEARINGS



TOLEDO MICRO BEARINGS

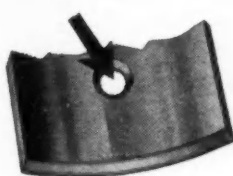
Toledo Micro Bearings have high heat dissipating qualities, high load strength, and greater fatigue resistance.



TOLEDO BEARINGS FOR HEAVY DUTY

The Toledo CL-77 Bearing has a low co-efficient of friction and a load capability that makes it the most efficient engine bearing on the market for heavy duty service.

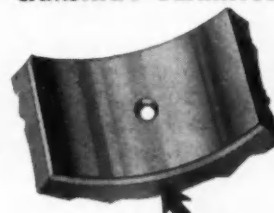
HIGHEST QUALITY CON ROD, MAIN AND CAMSHAFT BEARINGS



COUNTERSUNK
ON BOTH SIDES



BROACH FINISH



PRECISION FORMED
BACK



REPLACE BEARINGS BY THE SET

To be sure of eliminating bearing and oil pumping troubles, engine bearings should be replaced by the set. To be doubly sure, replace with Toledo bearing sets. They are the same as used by many engine manufacturers for original equipment.

The **TOLEDO**
STEEL PRODUCTS COMPANY
TOLEDO, OHIO

Division of Thompson Products, Inc.

Since 1906 — World's Finest Automotive Parts



Fleet Training Courses

FLEET training courses have shown themselves to be a cost cutting way in obtaining the trained men needed in truck and bus fleet operation. Here is a list of such courses scheduled throughout the United States. Additional listings are welcome.

OCTOBER

12-16—Course for Trainers of Commercial Drivers, Institute of Public Safety, Pennsylvania State College, State College, Pa.

NOVEMBER

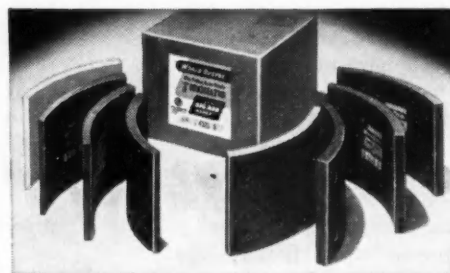
- 2-6—Motor Fleet Supervisor Training Course, University of Illinois, Urbana, Ill.
- 2-6—Course for Trainers of Commercial Drivers, University of Georgia, Athens, Ga.
- 9—Top Management Conference for Owners and Senior Executives of Motor Fleets, Institute of Public Safety, Pennsylvania State College, Philadelphia, Pa.
- 11—Top Management Conference for Owners and Senior Executives of Motor Fleets, Institute of Public Safety, Pennsylvania State College, Pittsburgh, Pa.
- 16-20—Motor Fleet Supervisor Training Course, University of Virginia, Charlottesville, Va.

Moving Through The Ages



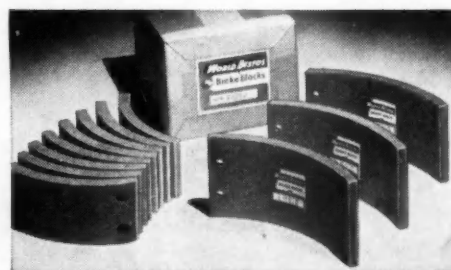
"When you get settled in your new place, we'll deliver these fig leaves and apples right to your door!"

6 million miles of proof



World Bestos RED BLOCK with the famous "No-Fade" Guarantee

For extremely severe conditions. RED BLOCK in the "J" Combination is guaranteed non-fading (heat or water) . . . gives longer mileage and reduced drum wear. New Wiper-Edge now gives 10% more braking surface, keeps brake drums clean.



World Bestos Brake Blocks for Heavy-Duty Trucks, Trailers and Buses

Blocks 1/2" thickness and over, in three different frictions covering all normal heavy duty requirements. Combinations may be used to assure maximum stopping power and long wear. New Wiper-Edge now gives 10% more braking surface, keeps drums clean.

WB

"OPERATION MS"

(MOST SEVERE)

● The American Petroleum Institute classifies everyday start-stop, low-speed traffic idling driving as Service MS, the most severe of all operating conditions. This is the driving pattern of the great majority of fleet engines.

Under "Operation MS," the engine seldom really warms up—maximum combustion blow-by creates soots, carbon, lead compounds and the most objectionable of all contaminants, *water in the oil*.

Water in the oil is the chief cause of sludge, most important source of engine operating difficulties. Water in the oil is the source of corrosive crankcase acids, a major cause of engine wear.

Walker Oil Filters are recommended for "Operation MS" (Most Severe) because they remove solid contaminants from the oil . . . and *water, too*. Walker patented *Laminar* construction takes out dust, dirt and abrasives through famous 3-way filtration. And the exclusive *Laminar* filtering material selectively removes water from the oil . . . helps keep the moisture content below the critical "sludge danger

zone" . . . minimizes acid wear by absorbing the acids contained in the water removed from the oil.

Walker Oil Filters are designed to protect oil and engine under the most severe of all operating conditions.

No other oil filter more completely meets the *extra* requirements of "Operation MS." No other oil filter more completely meets the needs of your fleet operations.

THE ENGINE PUTS IN	WALKER TAKES OUT
ROAD DUST From Engine Breathing	✓
CARBON SOOT From Engine Combustion	✓
LEAD SALTS	✓
METAL PARTICLES From Engine Wear	✓
MOISTURE From Engine "Blow-By"	✓

WALKER OIL FILTERS

WITH PATENTED *Laminar* CONSTRUCTION

WALKER MANUFACTURING CO. OF WISCONSIN, RACINE, WISCONSIN
Oil Filters, Exhaust Silencers, Jacks

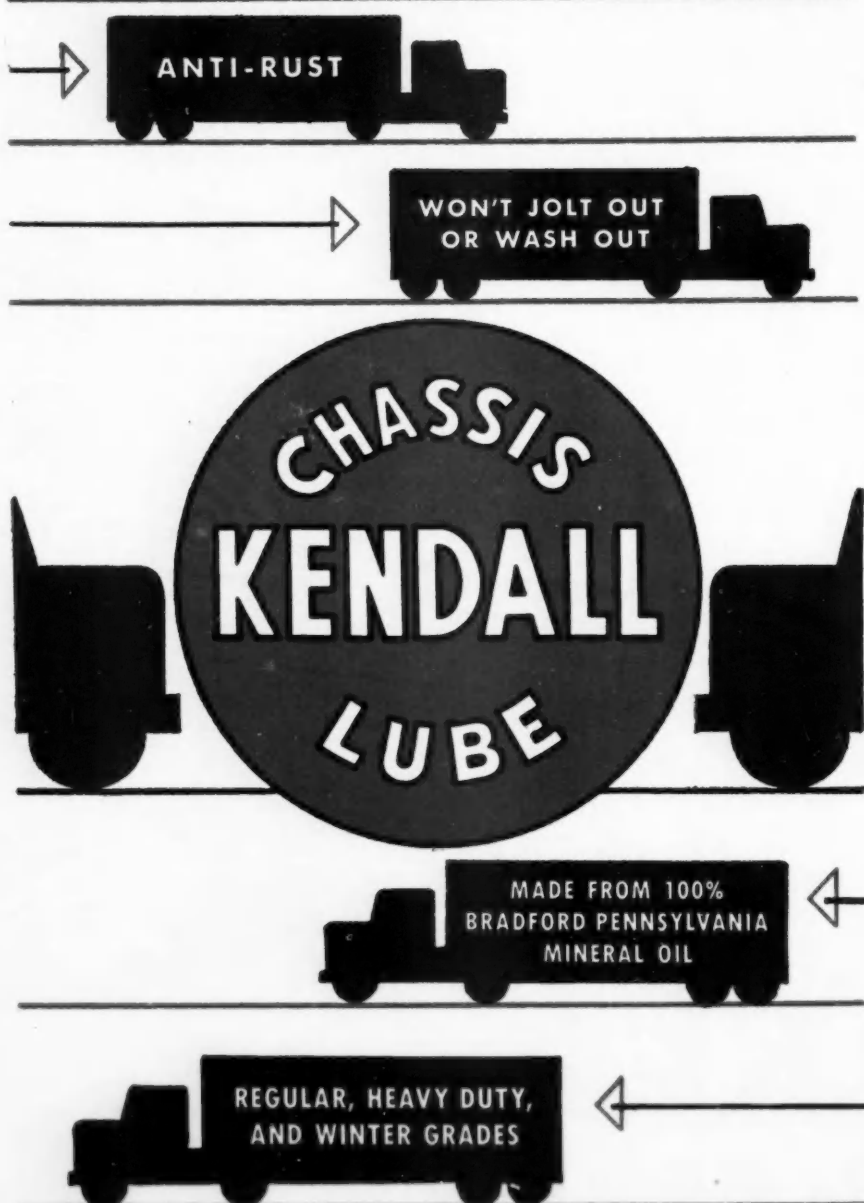


New Product Descriptions

Continued from Page 92

speed of any mechanic. With it, series of nuts found on heads or pans can be removed or installed in a fraction of the time necessary for standard hand tools and with no effort or fatigue on the part of the operator. Special attachments are available to handle either slotted or Phillips screws. The versatility of the tool continues for stud

pulling and replacement, driving gear pullers, hole sawing, drilling, etc. After a certain torque is reached the rotary action of the heavy duty motor is transferred through the impact mechanism to sharp, powerful blows at the drive spindle. The blows become heavier as the torque increases, thus, the larger the nut—the heavier



There's a KENDALL Lubricant For Every Requirement

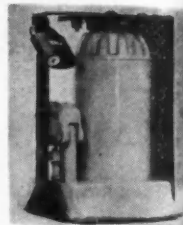
KENDALL REFINING CO.

Bradford, Pennsylvania

turning impact it receives. It delivers up to 2000 of these powerful rotary blows per minute. Forward or reverse action with or without the motor running is obtained by twisting the end cap.

P23. Jack Holder

W. J. Products Co., Oklahoma City, Okla., has just announced a jack holder designed to be padlocked thus holding the jack securely and safely.



It holds the jack in an upright position to prevent loss of hydraulic fluid and can be mounted inside or outside the cab. Constructed of steel, the top of the holder is adjustable for different height jacks and will fit any 5, 8, 10, or 12-ton and most 20 ton jacks.

P24. Timing Light

A new combination power timing light that operates on both 6 and 12-volt circuits is now being marketed by Auto-Test, Inc., Chicago. It contains a built-in voltage selector that automatically adjusts itself to battery input. The improved model also permits high-speed testing of engines up to 2500 rpm, without affecting engine operation.

P25. Battery Tester

A handy battery tester, the Model No. F-20 "Cell-Chek," has been announced by Allen Electric and Equipment Co., Kalamazoo, Mich. This new tester shows at a glance the battery (TURN TO PAGE 146, PLEASE)

Elevating Side-Gate



Outstanding feature of the all-aluminum truck-trailer pictured above is the elevating side-gate, powered by compressed gas from steel cylinders contained in the nose of the trailer. Designed and engineered by Trailmobile Inc., the trailer is capable of transporting 200 150-lb cylinders of compressed gas, for Air Reduction Inc. In the view above, the side-gate is lowered to ground level and forms a platform on which six cylinders of gas can be loaded and lifted, by compressed gas power, to the level of the trailer floor.

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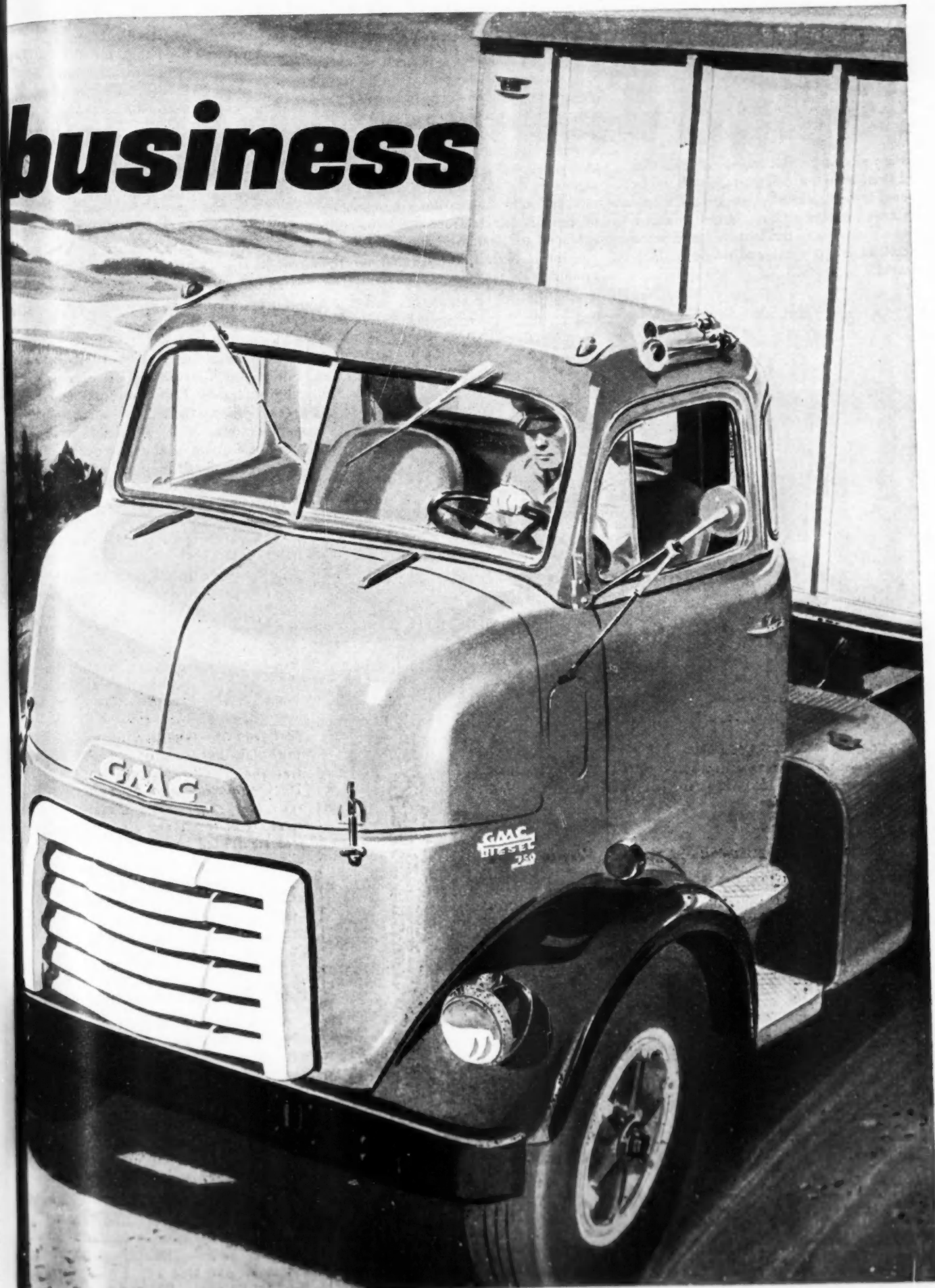
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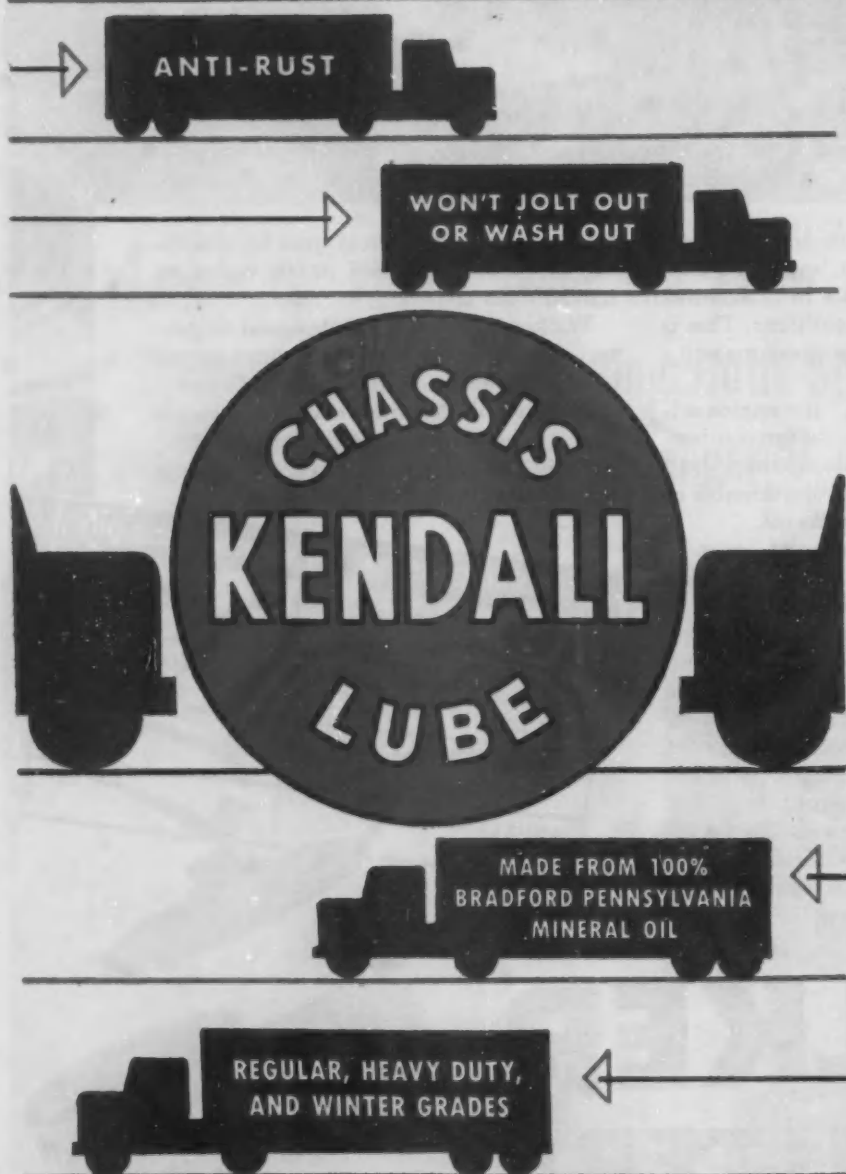


New Product Descriptions

Continued from Page 92

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There's a KENDALL Lubricant For Every Requirement

KENDALL REFINING CO.

Bradford, Pennsylvania

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A handy battery tester, the Model No. F-20 "Cell-Chek," has been announced by Allen Electric and Equipment Co., Kalamazoo, Mich. This new tester shows at a glance the battery (TURN TO PAGE 146, PLEASE)

Elevating Side-Gate



Outstanding feature of the all-aluminum truck-trailer pictured above is the elevating side-gate, powered by compressed gas from steel cylinders contained in the nose of the trailer. Designed and engineered by Trailmobile Inc., the trailer is capable of transporting 200 150-lb cylinders of compressed gas, for Air Reduction Inc. In the view above, the side-gate is lowered to ground level and forms a platform on which six cylinders of gas can be loaded and lifted, by compressed gas power, to the level of the trailer floor.

COMMERCIAL CAR JOURNAL, October, 1953

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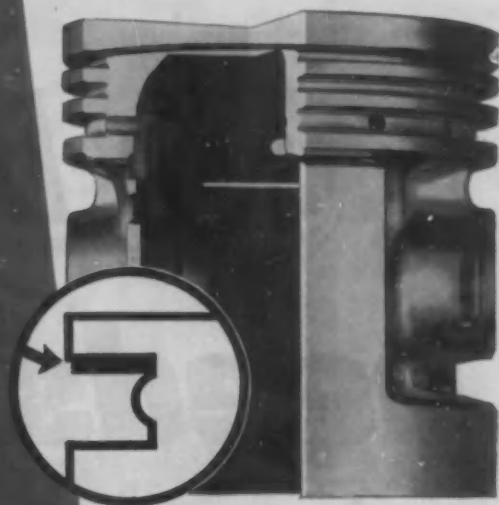
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HASTINGS MANU

Quick, easy insurance for piston and ring life!

Hastings Steel-Vent Sockets stretch the life of both pistons and rings—first operators report thousands of extra, trouble-free miles. These high carbon steel bands lock into place in top groove, easily machined with special Hastings tool bit. The spacer absorbs most of the punishment and dissipates heat. Available through your Hastings jobber.



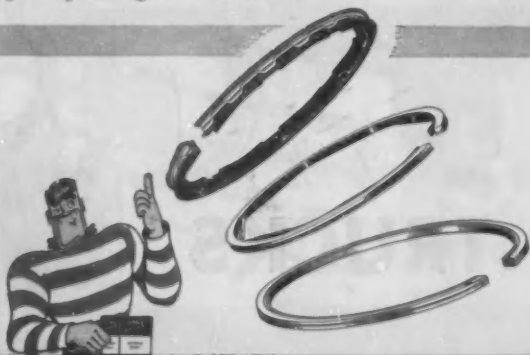
COMPLETE COVERAGE IN CHROME FOR DIESEL OR GAS



Ask for Hastings 2C Sets for re-ring, re-sleeve or re-bore. Each Set is *Motor Engineered* to the specific engine. Each incorporates the famous Steel-Vent Chrome oil ring. Companion rings are both regular and chrome, depending upon engine operating characteristics.



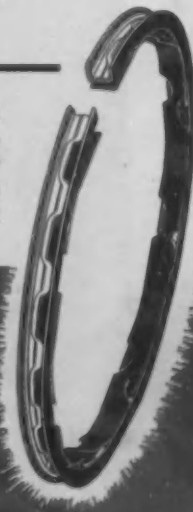
Ask for Hastings CT Sets if you prefer cast iron oil rings—for re-bore or re-sleeve service. Top compression rings are chrome-faced. Oil rings are provided with or without innerspring, depending upon engine operating characteristics.



Hastings considers each type piston and engine separately . . . develops and tests each ring under replacement conditions . . . engineers many special ring types for heavy-duty service. Hastings comes up with chrome top or oil or oil-compression rings to cover individual conditions.



Result: a Motor Engineered combination of the right rings for your engine, your operating characteristics, your replacement conditions. Specify Hastings Chrome on your next ring job—for more miles between overhauls, for top performance and economy.



HASTINGS

STEEL-VENT PISTON RINGS

Chrome Faced for Heavy-Duty Service

HASTINGS MANUFACTURING CO., HASTINGS, MICHIGAN; HASTINGS LTD., TORONTO • Piston Rings, Spark Plugs, Oil Filters, Cores

The bulk of your business needs this GMC!

A TRACTOR improperly designed for its job can cost you up to 10% of your cargo capacity on every trip through a 45-foot state. *But you collect on both extra bulk and extra tonnage when a GMC cab-over-engine tractor works for you!*

Secret of these c.o.e.'s extra-profitability is a short cab-plus-hood length that lets you haul the biggest capacity 35-foot trailers made today. Even complete "square-noses" are within the law — with ample clearance for jackknifed positions. The various kingpin locations found in interchange operation are no problem.

Your bonus in payload weight rides over these GMC's front axles. In some models this amounts to 895 extra pounds — without pushing legal limits.

What's more, GMC c.o.e.'s save money as easily as they make it. A turning radius as small as 20 feet cuts driver time in traffic and at over-

crowded terminals. Both gasoline and Diesel models deliver exceptional mileage. GMC's over-all ruggedness shrinks maintenance costs.

And remember — this isn't just one truck. Eight spectacular GMC c.o.e.'s cover the entire 26,000-65,000 GCW range. See your GMC dealer about the one designed for your business. Find out what a GMC can do to *your* profit picture!



GASOLINE 4,800 GVW TO 90,000 GCW
DIESEL 19,500 GVW TO 100,000 GCW

Get a real truck!

GMC Truck & Coach Division of General Motors

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53



New Products

Continued from Page 142

state of charge, the individual cell condition, and the cell voltage. A large, easy-to-read expanded scale voltmeter shows whether or not charge is needed, and indicates if the battery has a weak cell, or is worn out and needs replacement.

P26. Truck Derrick

A truck-mounted, power operated derrick that can be set up for work or stowed away by one man in two to three min is the newest product of J. H. Holan Corp., Cleveland, Ohio. The derrick, designated as Series No. 3100, is hydraulically positioned. It is designed to be permanently mounted on top of a utility body. Working capacity of the derrick is from 3000 lb. fully extended to 7000 lb in the short reach position. With the third leg on the ground a 10,000 lb straight pull can

be exerted. There also is an adapter arrangement available for the center leg which permits the derrick to be used with live boom effect to the full rated capacity through an arc of 70 deg.

P27. Cargo Heater

An automatic cargo heater conforming to the latest ICC regulations for trailers and trucks which burns methyl alcohol has been announced by Preco, Inc., Los Angeles, Cal. It produces up to 6000 BTU per hour and burns for 50 hours on full flame. It can be instantly set to control temperatures from 30 to 60 deg F irrespective of altitude or atmospheric pressure. Construction of the heater provides protection in the event it is damaged or overturned. It is explosion-proof and fully weatherproofed, being unaffected by wind, rain, sleet or snow. It is equipped with tip-over safety valves that prevent any leakage of fuel should the heater be tipped 30 deg and at the same time an automatic CO₂ system instantly extinguishes the flame. The heater burns methyl alcohol which eliminates the dangers of gas or fumes detrimental to perishable loads or humans. Venting to the outside is unnecessary. A spun glass wick draws fuel from the tank and in operation a pilot light burns constantly. A thermostat controls the temperature desired. It is equipped with a readable dial type fuel gauge. The heater is constructed of reinforced steel with stainless steel used in all parts where resistance to high temperatures and corrosion is essential. Spring hooks are used to fasten the heater in the desired location. Overall height is 24 in.; diameter 15½ in.; empty weight 38½ lb.

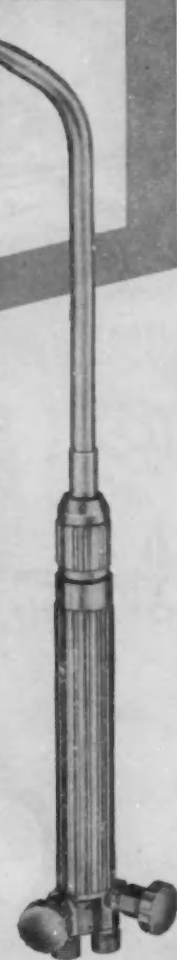


Here's why
PREST-O-WELD BLOWPIPES
Trade-Mark
cost so little to use
and maintain

- **SELF-SEATING VALVES**
Reseat scored valves when turned tight.
- **RUGGED HANDLE ASSEMBLY**
Wear-resistant bronze front body—heavy-walled seamless tubes—pressure forged valve body; all built for long, trouble-free service.
- **SLIP-FIT "O" RINGS**
Eliminate critical metal-to-metal gas seals. Easy to replace.
- **MIXER IN EACH HEAD**
Delivers perfect gas mixture for easiest and best work. New design resists backfires, eliminates burnouts.
- **SWAGED, PURE COPPER TIPS**
Streamlined gas flow and exceptionally stable flames. Heads snap in and out of handle. No wrench needed.

The PREST-O-WELD W-122 blowpipe (illustrated) is available with 13 standard welding heads and 3 multiflame heating heads, all of the snap-in type. Ask your LINDE jobber for a demonstration or write for further information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, New York.

GET IT FROM YOUR **LINDE** JOBBER



The terms "Prest-O-Weld" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

P28. Air Screwdrivers

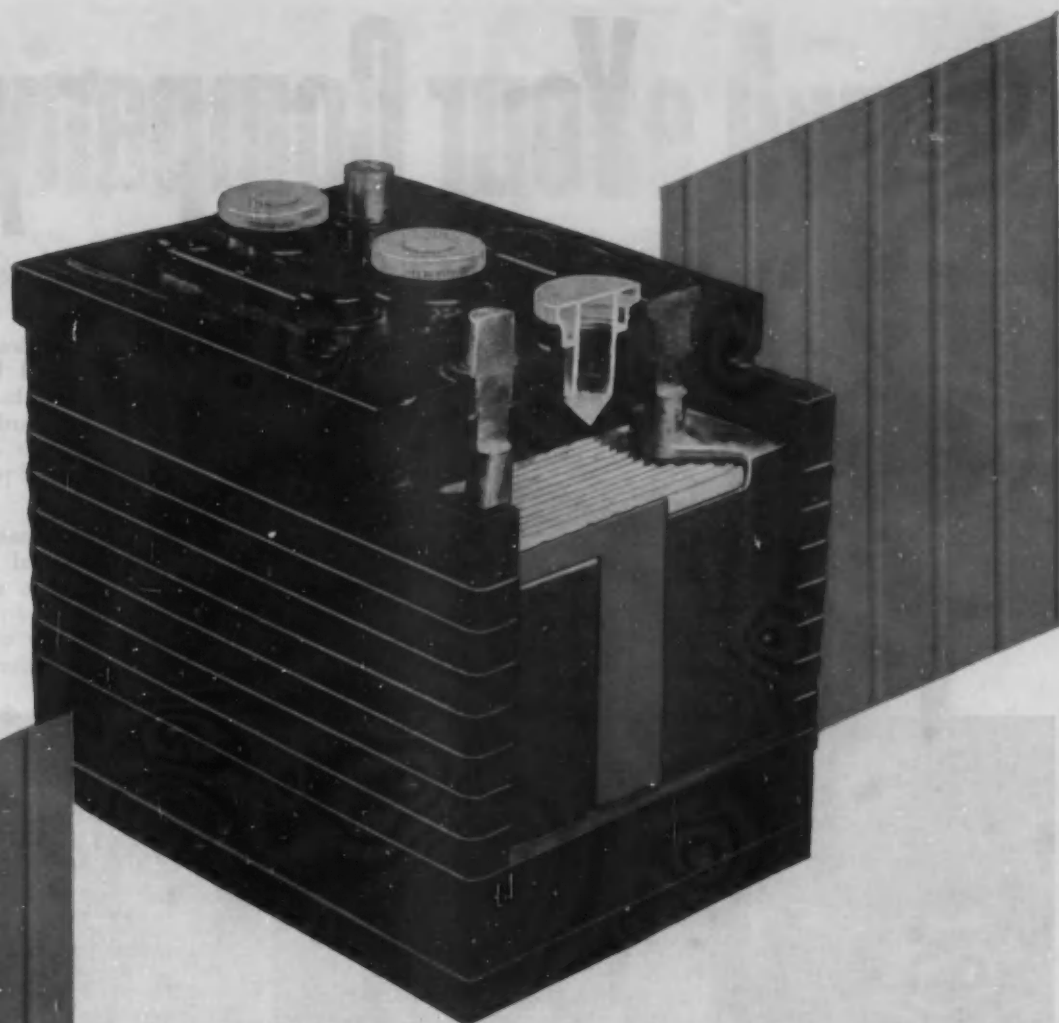
A new series of 24 light-weight, air-operated, reversible screw drivers and nut setters has been announced by Thor Power Tool Company, Aurora, Ill. They feature reversible motors to permit the tool's use for removing threaded fasteners as well as applying them. Available in four basic speeds, ranging from 475 to 2000 rpm, each is offered with either slip clutch (for exacting tension control) or positive clutch (manual control). Lever throttle or pistol type throttle is offered for all types. Eight additional models feature a 25 per cent slip clutch drive. (TURN TO PAGE 150, PLEASE)

Here
why

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COMMERCIAL

Here's
why



U. S. Peerless is the outstanding battery separator

Superior mechanical strength—The plates can never break through U.S. Peerless Rubber Separators.

Higher porosity allows faster circulation of acid, permits up to 20% faster cranking speed.

Unaffected by overcharging, heat, battery acid or plate pressures.

Low electrical resistance means lower operating cost since minimum charge currents are required. This means improved starting performance in cold weather, delivering up to 10%

more power when needed most. In hot weather, Peerless gives extra protection.

More mileage per battery dollar. Cost per month is far less for Peerless-insulated batteries than for batteries insulated with ordinary separators.

The better the separator, the better the battery. Use the coupon to send for your free, informative booklet describing the physical, electrical, chemical and performance characteristics of U.S. Peerless Rubber Separators.

Battery Separator Sales
United States Rubber Company
Rockefeller Center, N. Y. 20, N. Y.

Gentlemen:
Please send me my free copy of booklet on U.S. Peerless Rubber Separators.

Name _____
Company _____
Street _____
City _____
Zone _____ State _____

UNITED STATES RUBBER COMPANY

Electrical Wire and Cable Department • Rockefeller Center, New York 20, N. Y.

COMMERCIAL CAR JOURNAL, October, 1953

147

Your Company, too,

1952-53 Safety Awards Made in Conjunction



National Trailmobile Safety Trophy

Your company, big, medium or small, can win one of these coveted Trailmobile Safety Awards made in conjunction with the Council of Safety Supervisors of the American Trucking Association.

Safety is a vital part of any trucking operation, because it is a practical way to increase company profits and promote better relations for the entire trucking industry.

For years, many trucking companies have been competing for the National Trailmobile Safety Trophy.

All judging is done by an impartial committee selected by the Council Safety Supervisors of the American Trucking Associations. Awards are based on documented records of accident experience and the over-all program of the company for safety.

This contest runs concurrently with the A.T.A. National Truck Safety Contest, and is open to all trucking companies. Any trucking organization winning the trophy for any three years retains permanent possession of it.

The purpose of this contest is to promote safety and courtesy through the operating personnel and drivers of competing fleets. Many companies tie this Safety operation into the contest for this trophy. This Trailmobile National Safety Trophy is regarded as outstanding in the trucking industry. Many winners have used this fact in their solicitations and public relations.

First Place Winners of the National Trailmobile Safety Trophy Since 1940

- 1940 Horton Motor Lines, Charlotte, N. C.
(Now part of Associated Transport, Inc.)
- 1941 Consolidated Freightways, Inc., Portland, Oregon
- 1942 Consolidated Freightways, Inc., Portland, Oregon
- 1943 Consolidated Freightways, Inc., Portland, Oregon
- 1944 Red Arrow Freight Lines, Inc., Houston, Texas
- 1945 Silver Fleet Motor Express, Inc., Louisville, Kentucky
- 1946 Silver Fleet Motor Express, Inc., Louisville, Kentucky
- 1947 Silver Fleet Motor Express, Inc., Louisville, Kentucky
- 1948 Pacific Intermountain Express, Oakland, California
- 1949 F. J. Boutell Driveaway Co., Inc., Flint, Michigan
- 1950 Pacific Intermountain Express, Oakland, California
- 1951 Pacific Intermountain Express, Oakland, California
- 1952 F. J. Boutell Driveaway Co., Inc., Flint, Michigan

State Safety Awards You Can Win!



STATE TRAILMOBILE SAFETY TROPHY

this beautiful trophy is awarded to the winning company in the mileage division who, in the judges' opinion, has done the best over-all job in the state. Three awards are made and the trophies become the property of the winners.

TRAILMOBILE SAFETY AWARD PLAQUES

are presented to the trucking companies who have the best safety record in their mileage division—one million miles a year or under; five million miles a year or under; over five million miles a year. Each plaque is engraved with the winner's name and address.

TRAILMOBILE SAFETY AWARD CERTIFICATES

are awarded to all trucking companies whose accident ratio is better than average for all fleets in this State Contest. Certificates are individually addressed to the winning company.

ALL STATE AWARDS ARE SPONSORED IN CONJUNCTION WITH THE AMERICAN TRUCKING ASSOCIATIONS COUNCIL OF SAFETY

can win one of these Awards

With The A.T.A. Department of Safety—Sponsored by Trailmobile

Tank Trailer Trailmobile Trophy

The Trailmobile Tank Trailer Trophy is awarded annually to the tank trucking company having the best record of efficiency, safety, and courtesy on the highway. This beautiful trophy is awarded under the rules of the National Tank Truck Carriers, Inc., of the American Trucking Associations. Write A.T.A. for full contest details.



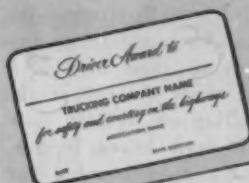
Trailmobile Driver of The Year Award

The most prized trophy a driver can win, the Driver of the Year Award, rewards individual skill, heroism and safety record. Each winner is presented by members of the American Trucking Association to the President of the United States, and receives the Trailmobile Trophy and other valuable awards. This contest is judged by A.T.A. and is a source of much favorable good will for the Trucking Industry.



THIS YEAR'S WINNER

S. R. "Pat" Burkholder, Sparks, Nevada, was named Driver of the Year by the American Trucking Associations for compiling a record of outstanding individual achievement—a perfect safety record for 27 years and numerous acts of personal heroism.



States now enrolled in this safety contest:

Arkansas
Colorado
Connecticut
Delaware
Florida
Georgia
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
New Mexico
N. Carolina
N. Dakota
Ohio
Oklahoma
Oregon
S. Carolina
S. Dakota
Tennessee
Texas
Utah
Virginia
Washington
W. Virginia
Wisconsin

HOW YOUR COMPANY CAN ENTER THE STATE SAFETY CONTEST

Remember, there are three mileage classifications in the Trailmobile Safety Awards Contest, big, medium and small, so your company has a fair and equal chance to win. To enter your company, get in touch with the Secretary of your State Trucking Association. Or write directly to The American Trucking

Associations, Inc., Department of Safety, 1424 Sixteenth Street, N. W., Washington, D. C. These annual contests and awards, conducted in conjunction with the Council of Safety Supervisors of the American Trucking Associations are sponsored by Trailmobile—on behalf of the Trucking Industry.



The Trend
is to

TRAILMOBILE



TRAILMOBILE, INC.

CINCINNATI 9, OHIO BERKELEY 10, CALIFORNIA
Friendly Sales and Service from Coast to Coast

TRAILMOBILE DRIVER MERIT CARDS

are awarded to all drivers of a company winning a State Trophy, Plaque or Certificate. Company's name and driver's name are imprinted on every Merit Card.

SUPERVISORS, AND AWARDED BY THE STATE ASSOCIATION.

COMMERCIAL CAR JOURNAL, October, 1953

New Products

Continued from Page 146

P29. Air Sander

The Lintern Corporation, Painesville, Ohio, announce a new Model No. 53-A air traction sander for trucks and buses. Features include reduced weight, simplified installation, completely sealed mechanism, dehydrator (eliminating moisture condensation), neoprene gaskets, weather splash

guard, and the availability of a new lightweight traction grit. It is air valve operated.

P30. Truck Crane

A new highly-mobile truck-crane, designated as the Model No. 80 has been introduced by Pitman Mfg. Co., Kansas City, Mo. Capacity up to four tons on a 25-ft. boom, with additional boom lengths up to 59 ft are features of the new crane, which is designed for installation on trucks $2\frac{1}{2}$ tons or larger. Standard boom length is 25 ft. Inserts are avail-

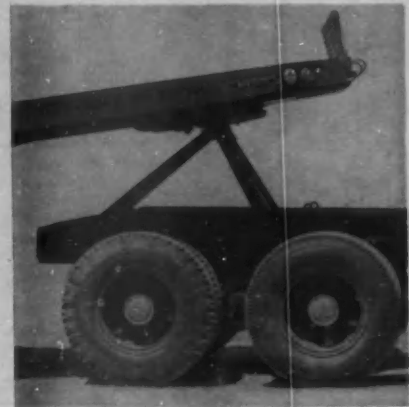
able for additional boom lengths of 37, 48, and 59 ft. Maximum ratings for these boom lengths are; 25 ft—8000 lb, 37 ft—6000 lb, 48 ft—3000 lb and 59 ft—1000 lb. The 25 and 37-ft booms are hinged on the side and can be folded and unfolded like a carpenter's rules.

P31. Battery Charger

Six individual cell meters make possible breakdown tests of both 6 and 12-volt batteries in a combination battery charger and tester announced by Quick Charge, Inc., Oklahoma City, Okla. This new charger is available in three models. The model shown is No. Q-350. It may be used as a slow charger, gang charger or quick charger, weighs 160 lb, is 16 in. wide, 16 in. deep, and 36 in. high.

P32. Fifth Wheel

Bartlett Trailer Corp., Chicago, has announced the development of a special new hydraulic lifting fifth wheel to be used by machinery movers, excavating machinery movers, road builders, house movers, and tractor delivery



companies. It lifts 24 in. above bed level and can lift 60,000 lb. It provides many conveniences such as loading and unloading on conveyor type floors both drum and pallet skids, roll paper for rolling on or rolling off, certain type aggregates, grain and heavy liquids. This model is not recommended for spotting as it would strike dock canopies when lifted.

P33. Degreaser

"Petisol 404 degreaser concentrate," a new formulation for the removal of grease and grime from metal parts, engines, truck and bus bodies, chassis, concrete floors, etc., is now available. Manufactured by Petroleum Solvents Corp., New York City, Petisol 404 is supplied in concentrated form and is diluted by the ultimate user with readily obtainable, inexpensive mineral (TURN TO PAGE 153, PLEASE)

You Can't Deny
It's Easy to Apply and Makes Two Doors as Solid as One

HANSEN

VITAL SPOTS

Modern, symmetrical, attractive; strong, durable, easy-gripping, Hansen Handles are suitable for rear, side or cab doors and are easy to apply.

A Great Deal Hinges on the Right Hardware!

SQUARE CORNER HINGES
 made by Hansen are fastened to side of body. They permit door to swing wide open, flush with side of body. They provide loading space the full width of body. Made of strong, durable, three-ply all-steel, with hardened steel thrust bearings. Two lengths—16" and 19". Width $2\frac{3}{4}$ ". Butt $5\frac{1}{2}$ " high, $4\frac{1}{2}$ " wide. Weights, 6 $\frac{3}{4}$ " and 8 lbs.

HANSEN HANDLES
 Illustrated is Hansen No. 73 Handle and Escutcheon. Specially designed for use with all small locks with standard $5/16$ " square bushing. Uses padlock supplied by user. Handle, 7" long, with $4\frac{1}{4}$ " grip. Shank $5/16$ " square, $3\frac{3}{4}$ " long. Hansen makes many other types of Handles. Full details about them in catalog sent on request.

REQUEST CATALOG

REAR DOOR AND SIDE DOOR LOCKS
 are available from the Hansen line for all types of doors—large or small, single or double. Included are rotary door, rotary and take-up; slamming, slam-and-take-up; heavy-duty; refrigerator. Hansen also makes other types of locks for many and varied applications in body construction. CATALOG WITH COMPLETE DETAILS ON REQUEST.

FOR COMMERCIAL BODY AND INDUSTRIAL USE
 Hansen is noted for its ruggedness, strength, durability, and trouble-free operation. Its use is not confined to commercial bodies, tanks, trailers, etc., but includes industrial uses on doors of power concrete mixers, power shovels, substation cabinets, locomotives, etc.

NEW ONE-UNIT LOCK
 New in the Hansen line is the No. 106-L one-unit Lock. Flush Handle and rods are integrated. Lock comes complete, ready and easy to install. Other new Locks and Handles have been recently added and are now available.

REQUEST NEW FOLDER No. 90

A. L. HANSEN MFG. CO.
 5047 RAVENSWOOD AVE.
 CHICAGO 40, ILL.

The Hardware for Hard Wear
HARDWARE for Commercial Bodies

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, 1953



we serve the aircraft industry, too

Spicer's 50-year record of service to the automotive industry is well known. But do you know that our long experience and highly developed skill are also helping to produce the world's fastest, highest-flying bomber?

We are manufacturing gears of almost unbelievable standards of quality and precision, for use in the new six-jet Boeing B-47 engines. These \$2,000,000 planes travel at 600 miles per hour, and can drop a full load of bombs from an altitude of 7½ miles anywhere in the world.

On the earth as in the sky, Spicer helps man move faster, better, more efficiently.



A Masterpiece of

METALLURGY

MACHINING

MICROMETRY

This gear, used in the J-47 jet engines, is typical of the superb workmanship exercised by Spicer in manufacturing aircraft gears.

Metallurgy is of prime importance. The parts are light in weight, with thin sections, and therefore must have maximum high strength. We have the most advanced metallurgical laboratory, for the analysis of chemistry of steels, inspection for flaws, and assurance of proper grain flow in forgings.

We have the newest equipment for heat treating, including gas carburizers, homo-carbs, rotary hardening furnaces, and a variety of quench presses and dies to control distortion.

Machining of these gears is held to tolerances of .0002 on the teeth. The cutting, grinding, shaving of gears and splines, and plating, is done on the finest precision equipment in the industry. Since aircraft parts must be completely interchangeable in the case of these gear units, absolute consistency must be assured.

And because aircraft engines must be highly resistant to wear, erosion, corrosion, and abrasion, the physical dimensions as well as finish, hardness and depth of hardness, the most delicate controls available are used.

The high stress under which the gears operate demand that the surfaces be absolutely free of scratches, and in most cases be very highly polished.

The skills which Spicer has developed in 50 years of service to the automotive industry now serve the aircraft people equally well.

SPICER MANUFACTURING DIVISION
of Dana Corporation • Toledo 1, Ohio



TRANSMISSIONS • UNIVERSAL JOINTS • PROPELLER SHAFTS • BROWN-LIFE AND AUBURN CLUTCHES • FORGINGS • AXLES • STAMPINGS • SPICER "BROWN-LIFE" GEAR BOXES • PARISH FRAMES • TORQUE CONVERTERS • POWER TAKE-OFFS • POWER TAKE-OFF JOINTS • RAIL CAR DRIVES • RAILWAY GENERATOR DRIVES • WELDED TUBING

New Pro

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McDouga N. Y., has "Hardcote" products ha modern spr by commerc four standa in the revis in five hour 'hot-spray' name has l Transit Fin

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New Products

Continued from Page 150

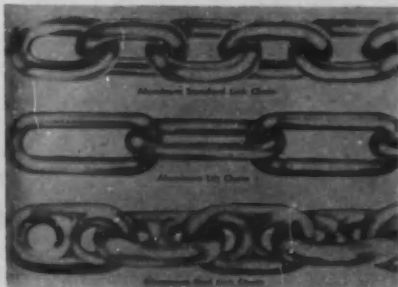
spirits. It is a clear liquid and does not become thick or tacky in colder weather. In proper dilutions it is used in agitating tanks, recirculating machines, water ejectors or straight tip operations, as well as brush or spray application.

P34. Transit Paints

McDougall-Butler Co., Inc., Buffalo, N. Y., has announced a revision of its "Hardcote Automotive" finishes. These products have been reformulated for modern spray methods of application by commercial and bus fleets. Twenty-four standard colors are now available in the revised line, which can be taped in five hours and which is suited for 'hot-spray' application. The product name has been changed to "Hardcote Transit Finishes."

P35. Aluminum Chain

Aluminum chain is now being produced by Bison Metals, Buffalo, N. Y. The new chain is light, strong and



enduring. It has 1/3 the weight of iron and is comparatively strong. It needs no painting and will not rust. It is produced in standard sizes. Various types are illustrated above.

P36. Hydraulic Tailgate

A new and improved hydraulic-powered, elevating truck tailgate is now available from The Heil Co., Milwaukee, Wis. The all-hydraulic unit can be mounted on any truck and can lift a maximum 2000 lb payload. Two platforms are available for the unit; a ramp type, and platform, or square edge type. The gate floor is corrugated for greater load capacity and to prevent floor sag. All hydraulic mechanism is mounted to clear the axle housing with no loss of ground clearance. Load bearing points utilize bronze bearings with high pressure lubrication fittings. A power take-off on the truck mechanism provides the hydraulic

(TURN TO PAGE 154, PLEASE)



The Missouri-Pacific Lines' new freight terminal at St. Louis—one of the world's most modern and efficient—is equipped with Kinneear Steel Rolling Doors and Kinneear Steel ROL-TOP Doors.

Where doors get their toughest assignments...

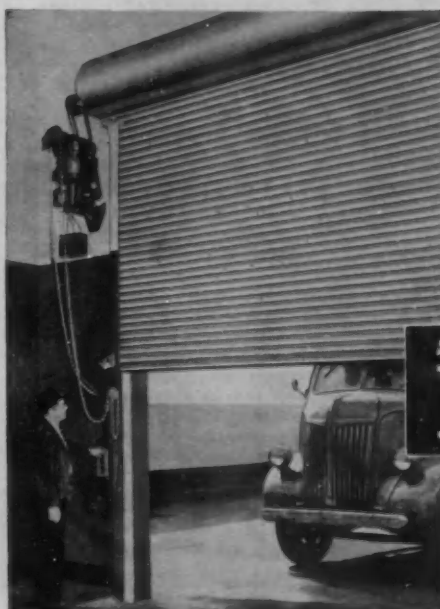
KINNEAR Rolling Doors prove their extra value for every need

The advantages of Kinneear Rolling Doors for all types of buildings are proved by their performance in big installations like this—where doors are the very life-line of efficiency.

The coiling upward action of Kinneear Rolling Doors makes all floor and wall space around doorways fully usable at all times. Freight or materials can be stacked close to the door curtain, inside and outside the building, without blocking door action.

Opening completely out of the way above the lintel, the doors stay out of reach of damage by wind or vehicles. The interlocking steel-slat construction—originated by Kinneear—provides a rugged, all-metal curtain that assures long service and low maintenance, plus extra protection against fire, theft, and the elements.

Kinneear Rolling Doors are tailored to fit any opening, in old or new buildings. Kinneear Motor Operators are also available, for push-button control. Write today for complete information.



Saving Ways in Doorways
KINNEAR
ROLLING DOORS

The KINNEAR Mfg. Co.

FACTORIES:

2100-20 Fields Avenue, Columbus 16, Ohio

1742 Yosemite Ave., San Francisco 24, Calif.

Offices And Agents In All Principal Cities

New Products

Continued from Page 153

pump with power. When the gate is operated on a semi-trailer uncoupled from the tractor, an electric motor or gasoline driven power pack can be used to supply power. The new elevating truck tailgate can be opened and lowered manually. Overall dimensions in inches are 84 x 28 to 90 x 52. The approximate weight of the unit on the rear of a truck is 725 lb; 850 lb total weight.

P37. Signal Lamps

New large, heavy-duty, face-mounted stop and turn signal lamps designed to make them vapor and explosion-proof have been announced by Betts Machine Co., Warren, Pa. Named the Warren Snap Seal No. B-70 lamps, they meet or exceed SAE recommended procedure, ICC and state requirements. Plastic lens is held bubble-tight within a cast aluminum alloy body which is also a superior reflector. Lenses are available in red, amber, green and clear colors.

P38. Connector Adapters

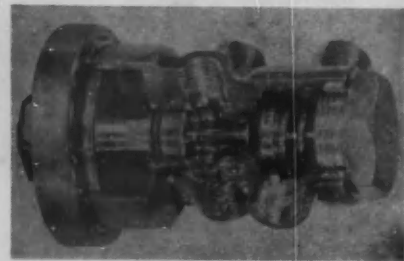
The Cole-Hersee Co., Boston, Mass., has introduced a series of four trailer connector adapters to take care of all trucks and trailers wired to standard coding. Specially designed to save the time and trouble involved in makeshift jumpers or the tracing of electrical circuits, these four adapters make the following pole plug to pole socket conversions: No. 11011 to No. 11017, No. 11012 to No. 11014, thus making trailers and tractors interchangeable on a broader scale.

P39. Heating Panels

Production of heat directing side panels for use with the Model No. PW-189 Fageol Heat Machine is announced by the Fageol Heat Machine Co., Detroit. Made of heavy sheet steel, the panels cover heat outlet openings of the portable heater and can be used singly or in pairs to direct heat as desired. The new side panels permit use where concentration of its 189,000 btu in one direction is required. Ordinarily the machine sprays out heat in three directions just above the floor.

P40. Drain Valve

Graham-White Mfg. Co., Salem, Va., has started production of its new automatic drain valve for compressed air



equipment on trucks and buses. The valve automatically rids air reservoirs and lines of harmful accumulations of sludge, scale, oil and water. One valve is standard for all sizes and types of compressors.

P41. Towing Hitch

Manley Division, American Chain & Cable Company, Inc., Bridgeport, Conn., announces the marketing of the Manley Heavy Duty Towing Hitch No. 2209. It features telescoping, shock-absorbing tubular steel arms that allow hook-up at any angle, complete turning safety (wrecker and towed vehicle cannot touch), automatic load centering, fully controlled back-up operation and regular brake application at open highway speeds.

END

Please Resume Reading Page 94

COMMERCIAL CAR JOURNAL, October, 1953

For Better Performance

Armor-Flex MOTOR MOUNTS

for trucks

Defective Motor Mounts can cause a trucker all kinds of trouble—such as engine vibration, motor misalignment, difficult gear shifting and clutch chatter. Play it safe. Check Motor Mounts regularly. Replace when necessary, from the Armor-Flex complete line of truck Motor Mounts.

For Greater Comfort

Armor-Flex FLOOR MATS

for trucks

Here are the qualities to look for in floor mats for trucks: They must lie flat — fit snugly in all corners and insulate cab against dust, heat, fumes and drafts. Armor-Flex Fitted Floor Mats are made of heavy rubber with thick insulating felt backing. They lie flat "over the hump."

For Greater Safety

Armor-Flex PEDAL PADS

for trucks

Truckers watch every detail that spells safety. That's why the tread on pedal pads and accelerator pedals requires frequent check-ups. A smooth tread can be the cause of an expensive accident. Armor-Flex replacement pedal pads add an extra measure of safety.

Doan MANUFACTURING CORP.
1761 LONDON ROAD • CLEVELAND 12, OHIO



YORK-HOOVER TRUCK BODIES

Deliver Packaged Goods
at **LESS COST** to YOU



Here's HOW and WHY

Yes, York-Hoover Truck Bodies deliver the goods for you at *less cost* because they're designed and built for your specific transportation problem. Designed for stability and convenience...built by fine craftsmen from the highest quality materials available...York-Hoover Bodies serve you *better and longer*.

Whether you are a manufacturer, distributor, or retailer your investment in York-Hoover Truck Bodies pays off in *longer, better, cost saving* service for you. Write us *today* regarding your body service problems. Let us give you the facts based on over 60 years of service to the truck industry.



York - Hoover

YORK, PENNSYLVANIA

Corporation

Body Division

Is Speed the Real Villain?

Continued from Page 66

whether faster or slower, tends to cause situations which may lead to accidents, if and when something is done to help cause an accident.

Desperately needed in the accident prevention effort is better determination of those things done wrongly or unsafely—whatever the speeds—which

cause accidents. Part of the universal quarantine on speed may be lifted if and when we identify the failures and inoculate with knowledge against the real accident causes: Following too closely, changing course suddenly without checking and failure to signal intent, wrong technique for getting back

onto pavements, overdriving headlights, overloading brakes, fatigue, inattention—and all those specific unsafe acts which when committed at any speed, may become accidents—and at higher speeds especially bad ones.

On this then we may agree—speed definitely determines the severity of the accident—even though it may not directly cause it. Most persons have not been taught—some are actually incapable—to drive safely at high speeds—if for no other reason than the fact they are at the mercy of all other drivers. Unless this principle is clearly understood by the fleet supervisor, a dangerous misconception may be generated, extending down to the operator himself. Until we attack the specific driving failures causing our accidents, we will continue to cluck our tongues depreciatingly at "speeders," impose harsher and often unreasonable speed limits, have police hiding behind billboards seeking quarry whose sole sin is going faster than their brethren, install governors on our vehicles to limit top speeds, and keep alive the ignorance and conditions which foster such familiar phrases as "Sunday driver, hot rod, flying low, eager beaver, and souped up jobs."

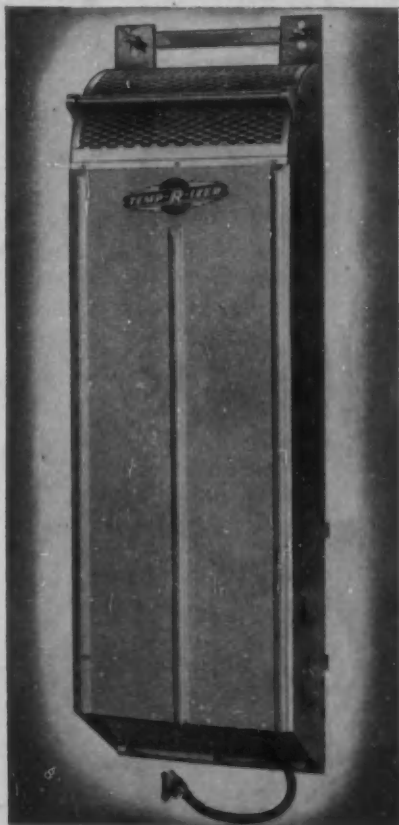
It is time that we admit there is no real safety in slowness, per se.

Once we have cleared our vision we can identify the specific causes and then teach our drivers how to cope with them.

END

Please Resume Reading Page 67

"FREEZE-FREE" YOUR CARGO



CONTROLLED SPACE HEATING FOR TRUCKS HAULING PERISHABLES

TEMP-R-IZER CARGO SPACE HEATERS are compact, all-steel units designed to protect perishable cargos by maintaining constant heat throughout cargo space area.

PROPANE FIRED — Self-contained and thermostatically controlled, requires a minimum of cargo space. Dual Propane Bottle Carrier of welded steel construction for under truck mounting.

SAFE—Automatic cut-off shuts off gas supply if truck is overturned. Heater's low surface temperature allows articles to be packed against unit without fear of fire. Junction Box permanently installed in truck floor, provides automatic shut-off of gas line when heater is removed.

PORTABLE—The mounting and demounting of the heater takes but a few minutes.

ECONOMICAL DEPENDABLE

Complies with I. C. C. Requirements for vented cargo heating

See your wholesaler or write us



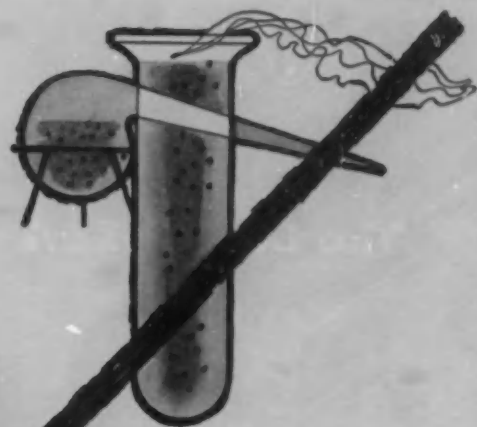
LAHARCO INDUSTRIES • 721 2nd Avenue North
MINNEAPOLIS 5, MINNESOTA

Emergency Kit



Salesmen for the Theo. Hamm Brewing Co., St. Paul, Minn., carry an emergency kit to meet any eventualities the weather man might concoct that should interest northern-fleet operators. The emergency kit includes: Canned beef, sausage and beans and liquid chocolate, all of which heats itself just by adding water, is ready to eat in ten minutes; two chocolate bars, small packages of cookies, package of cigarettes, knife, fork, spoon, can opener, plastic cup, hand warmer, box of waterproof matches, flashlight and eye shield. Packed separately are flares, a first aid kit, a fire extinguisher, hand warmer fluid, shovel and chains. The salesmen have already been equipped with sleeping bags for emergency use.

Two lanes on the road to **PROGRESS**



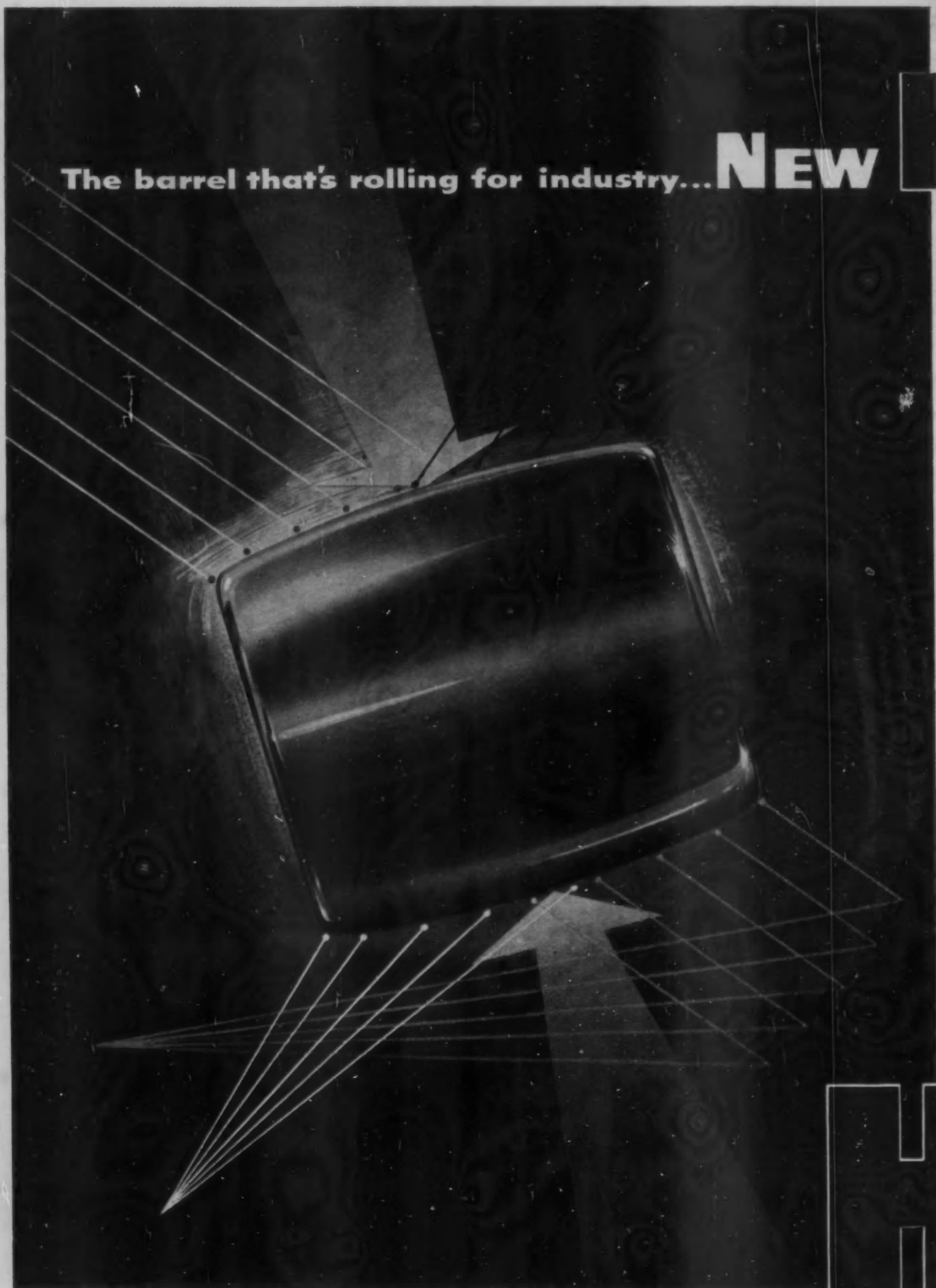
Today's mighty rayon tires are being improved two ways — by the producers of rayon and by the makers of the finished tires. Day in and day out, research and experimentation goes on in the rayon laboratories. Greater toughness and even greater flex life are gained by controlling the materials and methods of production. For rayon is man-made and can be controlled for man's benefit. Better methods of utilizing improved rayon cord are the business of the tire manufacturing industry, who follow through with advances of their own. The end result is a two-fold gain: A double reason why the importance of rayon tires continues to soar—year after year.

Enka is a major producer of Rayon for tires.

ENKA RAYON FOR CORD IN TIRES

American Enka Corporation, 206 Madison Avenue, New York 16, N. Y.

The barrel that's rolling for industry... **NEW HYATT**



HYATT BEARINGS DIVISION, GENERAL MOTORS CORPORATION

no

Hyatt is giving a
—pione
volume
like it-
product

The Bar
... but
dual-p
unique
operate
of misa
rollers
high lo
Barrel

Expens
—plus
plants
you wo
solution



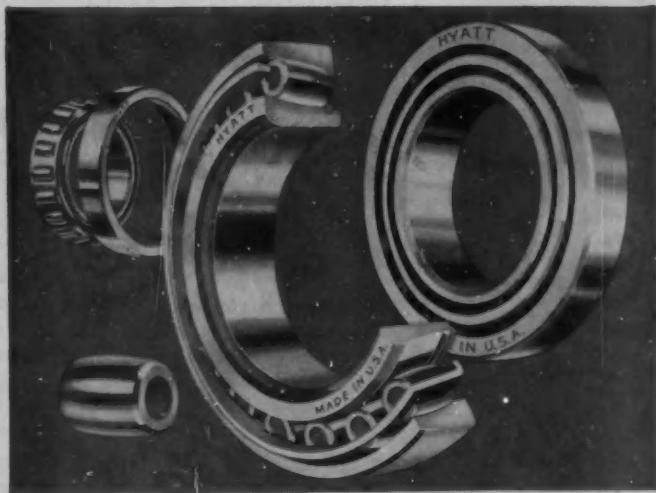
HYATT BARREL BEARING

**now available
in volume!**

Hyatt is rolling out the barrels! . . . and a familiar shape is giving a big lift to modern industry! A new Barrel Bearing—pioneered and perfected by Hyatt—is available in volume for the first time! There's no other bearing quite like it—and it's ready for a starring role in industrial production!

The Barrel name comes from the barrel shape of the rollers . . . but its superiority in bearing applications comes from *dual-purpose design* and *self-aligning ability*! This unique bearing takes load from any direction . . . and operates at full load-carrying capacity under conditions of misalignment! And in addition, the barrel shape of the rollers combines the low rolling friction of a ball with the high load capacity of a cylindrical roller—so that the Barrel Bearing is ideal for a wide range of applications.

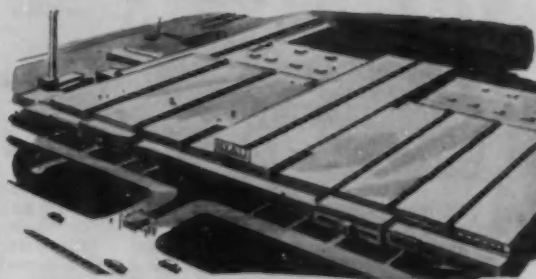
Expensive? *Not at all!* Advanced manufacturing processes—plus the facilities of one of the newest and finest bearing plants in the world—make the initial cost far lower than you would expect! . . . For full information on this newest solution to the friction problem, write to the address below.



Self-aligning action makes the Barrel Bearing ideal for tractors and farm implements. Over many years, its durable, dependable performance has been established in a wide range of these applications.



In trucks and construction equipment, too, Hyatt's Barrel Bearing operates with full efficiency under conditions of heavy, multiple-direction loading. Unique roller and race design distributes the load over large areas of contact.



Hyatt's new plant, in Clark Township, N. J., is among the most modern in the world. New equipment makes possible advanced manufacturing processes, and research facilities are the finest in the bearing industry.

HYATT ROLLER BEARINGS

HARRISON, NEW JERSEY

Gemmer Announces Linkage-Type Power Steering Unit

GEMMER MFG. CO. has announced a new linkage type power steering unit. The new model, known as the "Hydraguide Linkage Unit," will not supersede the maker's integral "Hydra-

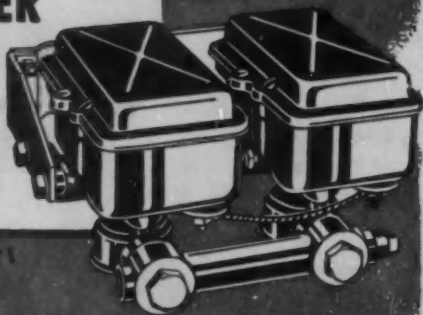
guide," but is designed for use in those installations where a front end linkage unit is needed. It will be built in at the factory on vehicles for which it is adopted.

Some of the features claimed for the new unit are:

1. Performance equal to the integral "Hydraguide."
2. Valve free of forces other than those needed to actuate it.
3. Balanced power piston areas—no unbalanced forces to drift the car from the desired course.
4. Piston rods and cylinder of exceptionally rugged construction to avoid damage. This is extremely important, as a front end unit is necessarily in an exposed position. The unit also has special protection against front end shocks.

Better 3 WAYS

STEWART-WARNER
Electric
FUEL PUMP



1. MAKES... STARTING EASY!

2. SAVES... YOUR BATTERY!

3. PREVENTS... VAPOR LOCK!



No more hard, slow starting... no more fuel pump failures—when you install this famous Stewart-Warner Electric Fuel Pump. Proven in use on thousands of trucks... better 3 ways... increases your truck's efficiency every day, every mile!

1. Ends Vapor Lock... independently mounted... independently operated, this efficient Electric pump primes itself... starts working before engine turns over! Eliminates vapor lock by pushing vapor pocket out of fuel line.

2. Assures Instant Starting... in any weather! Delivers all the gas your engine can use... free flow capacity is 30 gallons or more per hour. Heavy-duty dual unit (the choice of smart truck operators) provides extra capacity, an extra pump in reserve for emergencies.

3. Gives Longer Life... "road-tested," this amazing Electric pump strokes 10 times less than mechanical pumps. This, plus no rotating parts, no pistons, no bearings to fail or wear out means less "roadside" time... less maintenance time and cost for you! See your dealer or write to Stewart-Warner for complete information.



ASK ABOUT THE STEWART-WARNER EXCHANGE PLAN

STEWART-WARNER

INSTRUMENT DIVISION

Dept. DD-103, 1840 Diversey Parkway, Chicago 14, Illinois



As shown above, the unit operates from the pitman arm of the conventional steering gear. The valve system is at the middle. The piston rods are fixed to the vehicle frame, and the cylinder and valve system move right or left as pressure oil is admitted to the respective ends. Pressure oil is supplied by a pump driven by the engine.

The hydraulic circuit provides for steering safety. The front wheels cannot swerve when striking an obstruction, a soft shoulder, or from a flat tire, and they are fully self-righting after a turn. In case of oil pressure failure, the system reverts automatically to manual steering.

... Better Shop Equipment

Continued from Page 71

Fig. 9. Radiator Flusher

This home-made circulator for flushing radiators consists of a 3/4-hp electric motor, centrifugal circulating pump, and hose attachment for the upper and lower connections. Cleaning compound is pumped from the tank upon which the pump is mounted, through the radiator at a capacity equivalent to that which the radiator must handle on the bus. A pressure gage at the pump shows up any back pressure resulting from restrictions.

The stand upon which the radiator rests consists of welded tubing with a rest upon which the radiator is placed as a convenience during the operation.

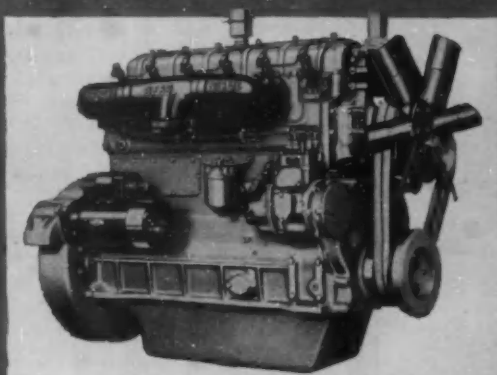
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Please Resume Reading Page 72

WAUKESHA

PAYLOAD POWER PLANT

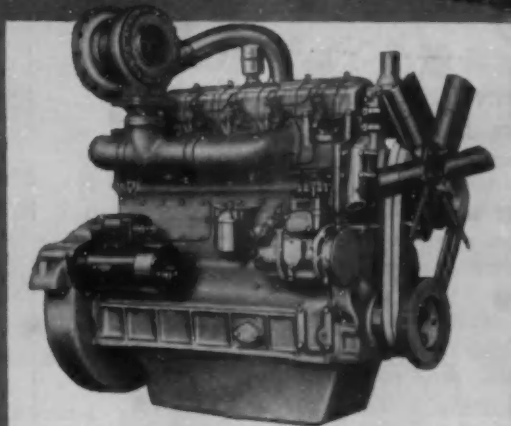
Diesel - 135 Series - Gasoline



135-DKB—NORMAL DIESEL
426 cu. in. Max. hp 147 @ 2800 rpm.

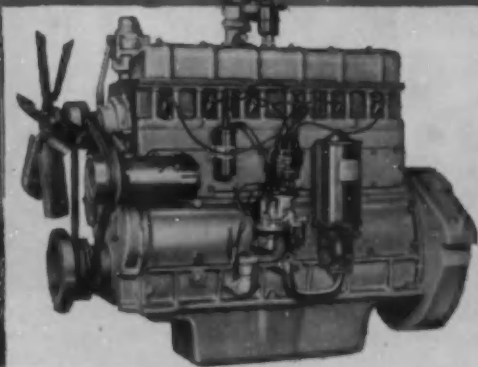


**FAST
SMOOTH
POWERFUL**



135-DKBS—TURBOCHARGED DIESEL
426 cu. in. Max. hp 185 @ 2800 rpm.

SEND FOR BULLETINS



135-GKB and 135-GZB—GASOLINE
426 and 451 cu. in. Max. hp 147 and 153 @ 2800 rpm.

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS. • NEW YORK • TULSA • LOS ANGELES

COMMERCIAL CAR JOURNAL, October, 1953

161

FLEETMAN'S LIBRARY

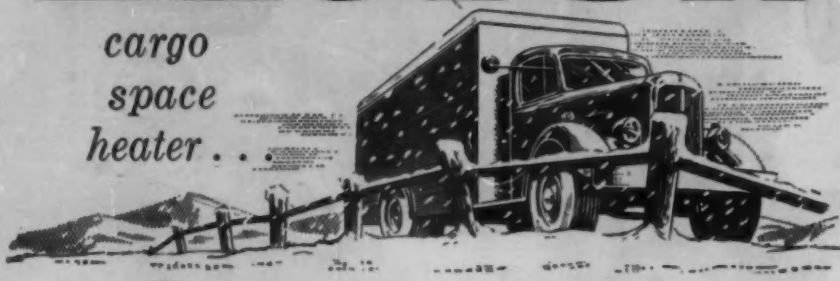


Air-powered, light-weight tools in the company's No. 2 Series are described

in a new 12-page catalog available from Thor Power Tool Co., 175 North State

ELSTON

cargo
space
heater...



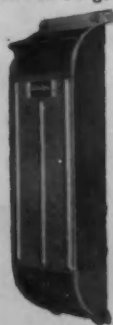
TERMINAL-TO-TERMINAL CARGO PROTECTION

Self-Contained

Propane Fired

Thermostatically Controlled

Fleet owners across the country are finding the ELSTON X-800 and X-700 cargo space heaters the answer in preventing cargo damage in event of sudden temperature drops. ELSTON heaters maintain even cargo temperatures! Time and time again, valuable cargos have been saved from frost and spoilage with these efficient, dependable heaters. Choice of X-800 with three basic parts . . . portable heater assembly . . . junction box . . . dual bottle carrier, or the Model X-700 roll-away unit, an entirely portable heater. Low cost—rugged construction—safe operation . . . all add up for your assurance of terminal-to-terminal cargo protection. Heaters comply with I.C.C. flue-vented cargo space heater requirements!



ELSTON X-800



ELSTON X-700

ELSTON cargo space heaters—designed to protect valuable, perishable cargos by maintaining constant heat *when* and *where* it is needed! Visit your local ELSTON Dealer for further information or write to:

another quality product by

rue r. ELSTON company

2397 University Avenue, St. Paul 14, Minnesota.

St., Aurora, Ill. Over 100 different combinations are available in the series, including drills, grinders, screwdrivers and nut setters.

Motor carriers equipped to transport frozen foods are listed in a newly published directory. Names and addresses of 185 carriers are included together with information on equipment, scope of operation, insurance, etc. Copies are available at \$5.00 each from National Assn. of Frozen Food Packers, 1415 K St., N.W., Washington 5, D. C.

Locknuts, and a special adaption called "Studloc" for locking tappet adjusting screws, cylinder head studs, housing covers and flange studs, are described and well illustrated in an 8-page folder available from Security Locknut Corp., North and 15th Avenues, Melrose Park, Ill.

Gasoline dispensing pumps for fleet terminals are covered with complete specifications in a six-page folder you can get from Johnston Pump Co., 3272 East Foothill Blvd., Pasadena 19, Cal.

Oil filter specification sheet for all 1953 trucks and buses can be had by writing Purolator Products, Inc., Rahway, N. J.

Gasoline engines built by its Fageol Products division are described in a new bulletin, No. L-7696, you can get by writing Twin Coach Co., Kent, Ohio.

Shop machine models built to a scale of $\frac{1}{4}$ in. to 1 ft that are available to aid in shop layout and planning are described in Bulletin No. 5301 just published by South Bend Lathe, South Bend 22, Ind.

Brake service manual just issued by Grey-Rock Division, Raybestos-Manhattan, Manheim, Pa., is the 10th edition of this manual. The truck and bus section has been revised and expanded to include latest data. Copies are available from the company at \$2.50 each.

Engine pre-heaters are described in a brief folder available from Kim Hotstart Mfg. Co., West 917 Broadway, Spokane 1, Wash. Full specifications and advantages are given for fleet use in cold weather starting.

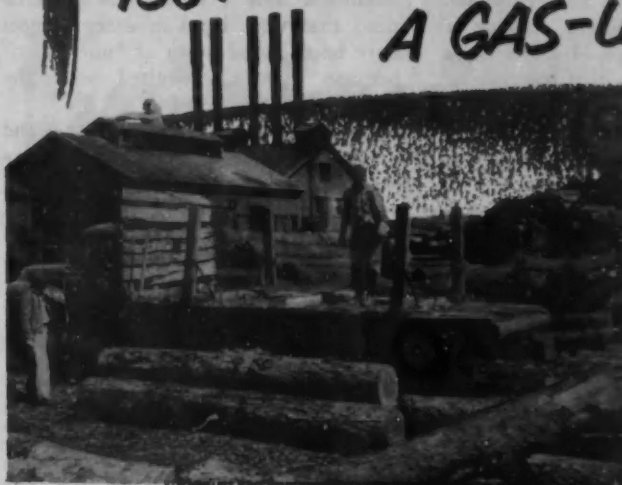
Tire, battery and accessory replacement data for light trucks from 1941 to 1953 are given in a quick reference chart available by writing United States Rubber Co., Rockefeller Center, New York 20, N. Y.

"Accident Facts," National Safety Council's statistical annual on motor vehicle as well as industrial and shop accidents, is just off the press. You can obtain copies of this 96-page accident fact reference book at 75¢ each from National Safety Council, 425 North Michigan Ave., Chicago 11, Ill. Reduced prices are available for quantity orders.

FATTY FLOORBOARDER, OUR CITY DRIVER, SAYS THAT MANY A BOSOM COMPANION TURNS OUT TO BE A FALSIE FRIEND.

COMMERCIAL CAR JOURNAL, October, 1953

**HAULS 15 TONS... COVERS
136 MILES DAILY... WITHOUT
A GAS-UP STOP!**



*Oscar
Riendeau*

**NEW HAMPSHIRE LOGGER, GETS GREAT
TRUCK AND BULLDOZER PERFORMANCE WITH
COMPLETE LINE OF CITIES SERVICE PRODUCTS.**

Riendeau says, "Since switching to Cities Service Gasolene and Oil, I can make two round trips to the lumber mill, some 136 miles, without a gas stop. We couldn't do that before."



"My 9.00-20 Pacemaster Deep Skid Tires are given the roughest treatment on our bulldozer roads. They're able to take a beating with the best of them . . . get me in and out of spots we couldn't work in before."

"My Truck runs as many as 18 hours a day over the toughest kind of going. I've found that Cities Service Triple HD Koelmotor Oil gives top performance under the tough conditions found in my operation."

**CITIES
SERVICE**

"On the basis of the success I've had with them, I recommend Cities Service Products for the most rugged jobs as well as the lighter types of trucking."



"I cut my own truck roads through the forest with an International TD-14 Diesel. My 'dozer' is always on the job thanks to top performance with Cities Service Diesel Fuel Oil and Lubricants."



LEGAL CORNER



FEW truck operators bother to ask their neighbors before opening a new terminal or garage. Usually their lawyer makes certain that everything is legal, all licenses in order and zoning permits obtained; unfortunately that isn't enough. Within the past few

New Terminals Need Friendly Neighbors

months a half a dozen new installations that were legal in every respect have been closed down as "nuisances," because nobody consulted with the neighbors before moving.

With modern traffic conditions and the trend toward decentralization many fleets are establishing garages, docks, and terminals in new locations, often outside established business districts. Such activities mean that trucks are coming and going at all hours, there is noise and dust and if this disturbs the sleep of some of the neighbors they can make a great deal of trouble.

How It Works

A NEW JERSEY feed company built a new warehouse in an area that was very much on the wrong side of the tracks; there were factories and other warehouses in the area, it was zoned for industry and seemed a natural place for it, but the tenants of a tenement across the street from the new building didn't think so and got an injunction. The judge said that the fact that there were other businesses in the area made no difference as no one had complained about them, and the fact that the complainants lived in crowded slum quarters might only make the nuisance more unbearable. The injunction provided that loading and unloading could be carried on only at certain hours and that special precautions be taken to control dust.

(TURN TO PAGE 166, PLEASE)

Contract Washing



Mobil Clean, a contract washing service for fleets in the Detroit area, is located at 1513 Michigan Blvd., Lincoln Park, Mich. Using a former Army tank truck, Mobil Clean cleans vehicles on the owner's lot without moving vehicle to a wash rack. Tank on truck is divided in half carrying both detergent solution and clean water rinse. Washing is done with Laco fountain brushes made by Laitner Brush Co., Detroit.

AGAIN-

National
GARAGE TOOLS

LEADS

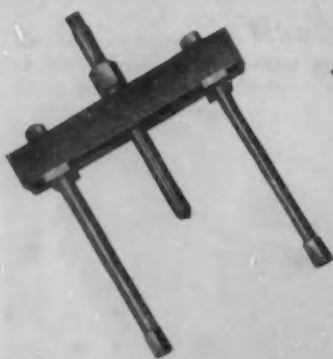
THE FIELD

Now **National** offers a Complete Line of **QUALITY PULLERS** at Prices You Can Afford!

HIGHEST QUALITY — complies with government specifications.

INTERCHANGEABLE — with National pullers and other pullers on the market.

ATTACHMENTS — a complete range of interchangeable attachments for wide range of work available.



TOUGH TOOLS

FOR TOUGH JOBS

NATIONAL
MACHINE AND TOOL CO., INC.
JACKSON, MICHIGAN
U. S. A.

Choose the hoist with 9 lives...



CHOOSE HERCULES—Whatever the type or capacity of the next dump truck hoist you buy, the name HERCULES is your strongest guarantee of top performance and long life. From coast to coast, Hercules Hydraulic Hoists are favorites because they have earned the reputation of having 9 lives. Owners are continually amazed at the ability of Hercules Hoists to withstand severe use and to outlast other makes without repair.

One of the famous Hercules Hoists is the Model 100 for 8 to 11 ft. dump bodies. Here are nine reasons why the Model 100 has nine lives, and why you should make it your next choice in this work range:

1. Takes more overloading.
2. No cramping nor strain on hinge bolts.
3. Lift arm design keeps body from tilting farther than intended.
4. No hoist stresses except direct lift transmitted to truck frame.
5. Uniform oil pressure.
6. Maintenance requirements are minimum.
7. Every part can "take it"—no Achilles' Heel.
8. Precision built of highest quality materials.
9. Rigidly inspected at every step of production.

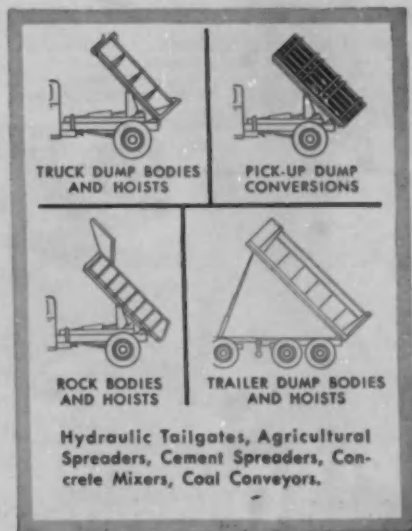
BUY FROM THE LINE OF STRONGEST DESIGN

Hercules



HOISTS AND DUMP BODIES FOR EVERY NEED

HERCULES STEEL PRODUCTS CORPORATION • GALION, OHIO



Why Are Replacement Valve Seats .008 or .010 Oversize?

(WHEN FACTORY REQUIREMENTS ARE ONLY .004)

Because Portable Cutting Tools Aren't Accurate!



When the cutter is fed down, the foot will lift slightly even on the best equipment. If the bolt through the Holddown Foot is close to the fulcrum, a fairly accurate hole is made. The hole becomes larger and tapered when the bolt is moved farther from the fulcrum.

In use, the bolt position may change two or three times on the same cylinder head or block, and holes may vary from .001 to .006. This means that press fit interference varies from .002 to .010. The result is excessive press fit, which causes valve port cracks and distorted, cocked seats, which causes valve burning and breakage.

PETERSON'S



SELF-LOCKING SCREW-IN VALVE SEAT WITH EXPANSION CLEARANCE

Eliminates the problem of counterbore accuracy!

Even the heavy-duty P-B Holddown Foot allows oversize cuts, but it doesn't matter BECAUSE THE COUNTERBORE IS THREADED. P-B seats exert no radial pressure—even under extreme heat—due to clearance in threads. They eliminate cracks in valve ports common to some engines. P-B seats will stay round, where pressed seat (especially with excessive interference) distorts quickly. This causes valve failure. P-B gives 2 or 3 times longer valve life, since it cools the valve evenly around the head, where 75% of the heat should be dissipated. Distorted pressed-seat doesn't cool valve. The valve stem grows and sticks in guide. Cocked pressed-seat definitely causes most broken valves.



NORMALIZED

Made of tough chrome-nickel-iron, individually cast under pressure. Unlike pressed-in seats, P-B Screw-In Valve Seats retain their original dimensions, won't buckle and come loose, can't tilt and cause hot spots and valve burning, and allow for perfect seating of valve on every stroke.

Under heat, it expands outward and slightly downward, becoming tighter.

HEAT-TREATED

Mechanics say pressed-in seats look like this before they start grinding.

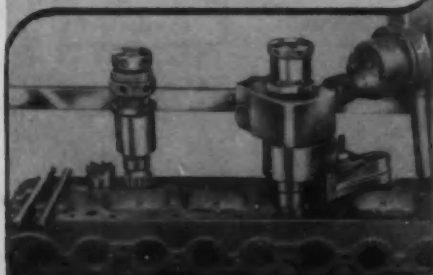


AMAZING PERFORMANCE

- SAVES COSTLY BREAKDOWNS—Eliminates 75% of valve burning, sticking, and breakage. Also eliminates 75% of valve port cracks due to radial pressure of expanding pressed-in seats—or valve port cracks in many heads where no seats are used.
- REPLACE MANY TIMES—You can replace

P-B seats without damaging the threads in counterbore or going to an oversize.

- NEW-ENGINE VALVE MILEAGE—And the seat remains tight in the counterbore.
- EASY TO REGRIND—After long service just a light touch with the grinding stone cleans it up because it is not out of round.



PRECISION INSTALLATION EQUIPMENT

Patented tooling guarantees threads square with bottom of counterbore, thus insuring self-locking feature.



Special CUTTER makes precision counterbore and tap machines in expansion clearance between thread.



CONTACT YOUR MASTER SHOP TODAY

P-B Master shops are ready to help you solve your valve maintenance problems in every major U. S. city. Call him, or write direct.

PETERSON WELDING LABS, INC.

DEPT. C-10

1423 VIRGINIA

KANSAS CITY, MO.

Legal Corner

Continued from Page 164

In Kansas a contractor rented a field for his trucks, repair equipment, and supplies and to use as a depot during an extended construction job. He had been in operation only a few weeks when a farmer next door got an injunction that ended that field's usefulness for a truck depot. Fortunately the fleet investment was not high but the delay caused by the move was expensive.

The rule of law that makes trouble here is that if a business seriously disturbs the adjacent premises it can be stopped. The most celebrated use of the rule was around Pittsburgh when the steel mills first began to burn a finely powdered coal that ruined the curtains of all the housewives in the valley. A series of dramatic and expensive lawsuits were fought before the steel industry got permission to operate all the mills it built in the valley. The rule still means that if an occupant, either owner or tenant, can prove that a terminal, garage, or whatever is a nuisance, he can get an injunction.

When a new business first appears in a residential area, it is most vulnerable to this kind of attack. The rule is completely outside zoning and every case is decided on its own facts. If the neighbors can convince the judge that the new terminal is a threat to neighborhood peace he can and often does issue an injunction either stopping the operation entirely or curtailing it. Truckers don't lose all these cases; judges often decide that the disturbance isn't serious, or that the terminal or garage is too important to close down, or that the neighborhood is already so industrial that a few trucks can't change it.

The safe thing is to do a little checking before decentralizing. A few hours talking to neighbors can save weeks of trouble later. If a lease is being taken, get a covenant from the landlord that makes him responsible for the neighbors.

Tennessee Mountaineer: "I shore wish I had my wife back."

Transient Truck Driver: "Where is she?"

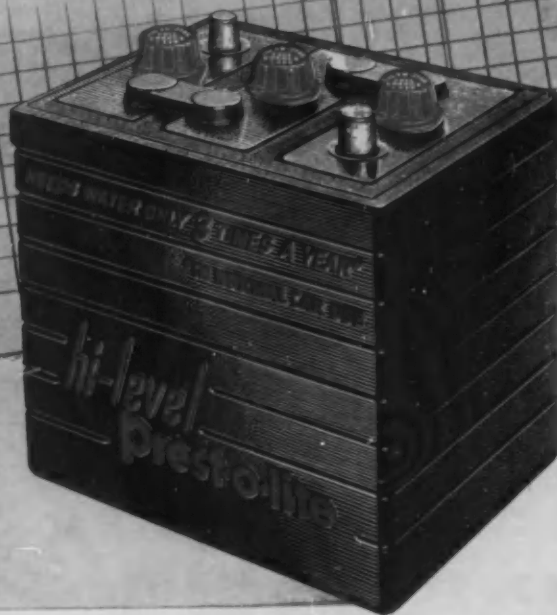
Tennessee Mountaineer: "I swapped her off for a jug of corn juice."

Truck Driver: "Beginning to miss her, huh?"

Mountaineer: "Nope. I'm jist thirsty again."

MAINTENANCE COST SHEET

Records prove Prest-o-lite
batteries reduce operating
costs... need water only
1/3 as often as ordinary
batteries... last longer, too!
Phone Prest-o-lite wholesaler
for special fleet prices



Fatigue Costs Money and Time

A "TIRED" employee is inefficient. If he's a mechanic, his tiredness may result in a slowdown of his work, or less accuracy in his job. If he's a driver, and dozes at the wheel, it could be fatal. If he's a supervisor, and his tiredness causes him to be irritable with

his staff it can result in a serious personnel problem.

"Industrial fatigue" is a complicated subject. Its causes range from the simple, such as lack of sleep, to the complex, such as the effect of the weather. And, although much research has been

By Dr. W. Schweisheimer

done on the subject, there are still many questions left unanswered.

For some people there are certain days which might better be spent in bed. They wake up cranky, can't seem to get organized, can't relax, and, although they don't feel sick, they do feel awfully tired. These are the people who are sensitive to the weather. Scientists are still not sure why, but they have been able to decide that the weather conditions are the cause, since a change in conditions causes the person to return to normal.

Boredom is another cause of fatigue. The Fatigue Laboratory at Harvard University in a ten-year investigation found that boredom definitely decreases efficiency and that unskilled work is on the whole more fatiguing than skilled work, since it doesn't occupy the worker's mind. Safety officials have applied this finding to the case of truck drivers, claiming that a driver is more inclined to doze at the wheel on a long stretch of straight road, than on a route which requires constant attention to curves, hills, etc.

Food and Fatigue

EATING habits can be important clues to the causes of fatigue. The right kind of food in the proper amounts is necessary to prevent fatigue. Many a tired driver has found that he feels much better after switching from a quick breakfast of coffee and toast to one which includes milk, butter, cereal, jam and egg. But at lunch, while nourishment is needed, the meal must not be too heavy or it will cause drowsiness in the afternoon.

Poor digestion can also result in a tired feeling. Its effect is the same as if (TURN TO PAGE 172, PLEASE)

Right Hand Drive



For mail and light deliveries, Willys Motors, Inc., Toledo, Ohio, has come up with a Jeep-like vehicle that features right side steering. The unit uses conventional two wheel drive, does not have the famous Jeep four-wheel drive. It is also available with left-hand drive. It is powered by the 72 hp, 4-cyl. "Hurricane" engine. There is a full length rear door.

COMMERCIAL CAR JOURNAL, October, 1953



Tops the field — in sales and value!

SOL-SPEEDI-DRI®

"Dry cleaning" with Sol-Speedi-Dri is America's favorite way to keep floors clean and slip-proof. Sol-Speedi-Dri is the largest selling oil and grease absorbent in the country. That's because pound for pound, dollar for dollar, it gives you more for your money, all factors considered. You can count on consistent quality, too—careful laboratory controls see to that. Send coupon today for free sample.

Warehouse stocks maintained in principal cities of the United States and Canada.

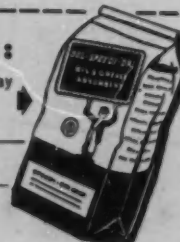
Inquirers in New York, New England, and New Jersey should write to Speedi-Dri Corp. Elsewhere in U.S. to Waverly Petroleum Products Co., 1724 Chestnut St., Phila. 3, Pa. In Canada, G. H. Wood & Company, Limited, Toronto. Branches throughout Canada.

SPEEDI-DRI CORP.
210 W. Washington Sq., Phila. 5, Pa.



FREE SAMPLE:

Fill out the coupon and mail today for free sample and literature.



Name _____
Address _____
City _____ State _____

CCJ-10-53

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r, 1953



2-ton shown with 14-foot stake—1½-ton also available

Decorative and other specifications subject to change without notice.

Get a thrifty Studebaker truck and cut costs on every haul

Studebaker's high-compression Power-Plus engine has the big torque you want for hefty loads. It gets you going quickly . . . keeps you rolling smoothly. Gas is saved every trip. Studebaker's light-duty truck models get big mileage out of every gallon, too. For proof, see any nearby Studebaker dealer.



It's easy to park and maneuver a Studebaker truck, whatever its size or wheelbase. Studebaker's unique variable ratio steering relieves you of a lot of physical effort. It automatically builds up welcome extra leverage as you turn the steering wheel.



You can ventilate the cab fast in any weather. Every Studebaker has adjustable window wings—and two foot-controlled inlets that scoop in fresh outside air at floor level. Steering post gearshift shown is standard on all the light-duty Studebakers.



America's hundreds of thousands of Studebaker trucks cut hauling costs millions of dollars yearly—Get your share of this operating economy. Studebaker trucks come in sizes and wheelbases for hundreds of needs—streamlined ½, ¾ and 1 ton pick-ups and stakes—rugged, powerful 1½ and 2 ton models. Studebaker's gas-saving Overdrive is available at extra cost in all of the light-duty models.

STUDEBAKER TRUCKS

© 1953, The Studebaker Corporation, South Bend 27, Indiana, U. S. A.



Lloyd LaGrow, Superintendent of Maintenance for Burlington Truck Lines Inc. describes his first-hand experience with ASF Safety 5th Wheels.

32' tandem, one of a fleet of 200 semi's operated by Burlington Truck Lines Inc. out of Galesburg, Illinois. In addition to the smoother riding of ASF Safety 5th Wheels, Burlington drivers like the easy-to-reach location of the locking handle, at the side of the wheel... and the safety latch that can be released with a flip of the thumb.

Remember this... about ASF

Largest king-pin bearing area of any 5th wheel... Absorbing stresses with a larger bearing area—50% larger than any other wheel—means longer life for king-pin and jaws.

Shorter king-pin bending leverage... Only $1\frac{1}{8}$ ", compared with an average of 2" for other wheels. Gripping the pin at the very top keeps it straight.

Automatically adjusting king-pin grip... It's the only wheel with jaws that adjust to king-pin diameter. Even pins worn as much as $\frac{3}{16}$ " undersize are gripped tightly!



Heavy trunnion-type brackets... Tractor pull and trailer weight carried on 26 square inches of trunnion area, instead of on pins, eliminates difficulties of the usual pin-type bracket. Deep sockets of the plate bring it down close to bracket for a straight-line pull.

Easy to maintain in perfect operating condition... Wear is inevitable, but on ASF wheels it's easily counteracted simply by inserting one or more low-cost shims between buffer and housing front wall. Result? Like-new service, without expensive rebuilding!

on the

Burlington
Route

"Our semi's run smoother with ASF 5th wheels"

There's just no topping the performance of an ASF Safety 5th Wheel on the road, according to Lloyd LaGrow, Maintenance Superintendent at Burlington Truck Lines Inc. in Galesburg, Illinois. He says:

"Our semi's run smoother with ASF Safety 5th Wheels. Burlington drivers can tell the difference without looking, just by the way the semi handles. Your king-pin jaw is backed up with a rubber block, which acts as a shock absorber.

"The same block also gives us complete freedom from slack. That's important, because even a little slack causes wear, which causes more slack, and so on.

"Smoother operation and lower maintenance costs are the reasons why we certainly expect to continue using ASF Safety 5th Wheels as more tractors are added to the Burlington fleet."

Smoother operation of *any* equipment is bound to result in lower maintenance costs. That's particularly true

of 5th wheels, as Mr. LaGrow points out. Other fleet operators may give you other reasons why they standardize on ASF wheels : : : but the fact remains that *once they use these wheels, they're seldom satisfied with a substitute.*

Just to satisfy your own curiosity, install an ASF 5th Wheel on *one* of your tractors. You don't need to keep it under a microscope to tell the difference! See your nearest ASF Distributor, or write to American Steel Foundries, Automotive Division, 410 North Michigan Ave., Chicago 11, Ill.

Make an investment in safety...with

ASF
safety 5th wheels

ASF Safety 5th Wheels



A 3000-pound "compression-grip" saves your maintenance dollars...

COUPLING—as the king-pin enters the jaws, the jaws are forced back against the exclusive ASF rubber buffer block, building up compression.

COMPRESSING—3000 pounds are built up before the lock clears the rear jaw, allowing it to snap to locked position.

LOCKED—and the jaws *remain* under compression. The grip is like a vise; eliminates the slack and backlash that can cost you money in added 5th wheel and king-pin wear.



A quick glance tells you the lock is locked...

LOCKED—as quickly shown by the lever and safety latch—which can *only* be in these positions when the jaws are truly locked.

UNLOCKING—with an easy twist of the wrist. Simply move the safety latch up, and pull and lever forward.

UNLOCKED—ready for uncoupling; parts in lockset position. *Handle can only move back to locked position when jaws are locked in next coupling operation!*

Fatigue Costs . . .

Continued from Page 168

insufficient food is eaten when a person is hungry, since the appetite of the system is unsatisfied. Overeating, on the other hand, produces quick fatigue, since the digestive organs demand increased blood supply for the long work of digestion.

A constant tired feeling is one of the early signs of diabetes. The diabetic cannot utilize part of the food he eats

until he has had his daily injection of insulin, the hormonal remedy which adds the necessary hormones to his system to offset the effects of the extra amount of sugar in the blood.

Recent clinical tests have shown that a lack of sugar in the blood also results in a person becoming high strung and easily fatigued. Persons who have either a low or high blood sugar content should see their doctors so that a remedy may be worked out.

Lazy bowels, chronic constipation cause fatigue. Absorption of poisons produced by stagnant bowel contents

may produce a constant feeling of fatigue and weariness. Care for proper bowel movement by observing a more stimulating diet brings improvement. Increased quantities of fruit, salads, vegetables, a coarser bread in the diet may stimulate the bowels, but conditions are different in different people.

Beating Fatigue

FOREMOST treatment of fatigue is to ensure that the person gets sufficient sleep. Eight hours rest are sufficient for the average person. Some companies aid the sleeping habits of their long-distance drivers by providing good accommodations enroute and even by checking the number of hours their drivers spend indoors at night.

Sport and exercise, satisfying work, a quiet mental attitude dispel fatigue. Some people do not need absolute rest after work. What they need is another kind of mental activity which makes use of parts of the brain not used during the regular work day. This is why a hobby is such a stimulating activity.

There is nothing better than a warm or cold bath or shower to make the feeling of fatigue and weariness disappear. Water on the skin provides for a changed distribution of blood throughout the body by draining blood from the tired brain and fatigued muscles to the vessels of the skin. Showers are more efficient in combating fatigue because of the mechanical stimulation of water hitting the skin.

Light, loose clothing aids comfort and helps on the job, and comfortable shoes with real support for the arches will help prevent unnecessary fatigue.

Depression and fatigue due to psychological causes may frequently be overcome by facing the worry honestly and thoroughly.

Stimulation provided by alcoholic beverages is short-lived and fades away to leave the drinker feeling more tired than before. Tea, coffee and cocoa are effective stimulants and are refreshing. For regular smokers, who are accustomed to nicotine, a cigarette means a real tonic.

Safe for Service?



Don't You Believe It!

You couldn't see the cracks in this Diesel engine crankshaft—no human eyes could. Yet Magnaflex-Magnaglo spotted them instantly during overhaul—showed them up with glowing indications as unmistakable as a flare on a dark highway.

This crankshaft would almost certainly have failed in service . . . with probable destruction of much of the engine, or even loss of equipment and cargo due to accident on the road.

Inspection with Magnaflex prevents such needless loss for truck and bus companies. Finding invisible cracks in crankshafts, connecting rods, engine blocks, gears, spindles, etc., it reduces road failures; cuts repair and maintenance expense; and insures safer, more dependable operations. Inspection with Magnaflex is a routine but vital part of every overhaul.

SEE YOUR MAGNAFLUX EQUIPPED SHOP

Next engine or truck you have overhauled, make sure the job includes inspection with Magnaflex—available through hundreds of Magnaflex-Licensed overhaul shops or Magnaflex' own laboratories. Write us for the location of the one nearest you.

How inspection with
MAGNAFLUX
can stop costly failures



MAGNAFLUX



MAGNAFLUX CORPORATION

7308 W. Lawrence Avenue • Chicago 31, Illinois
New York 36 • Cleveland 15 • Detroit 11 • Dallas 9 • Los Angeles 58 • Pittsburgh 36



"What's the matter? It was another tree wasn't it?"

COMMERCIAL CAR JOURNAL, October, 1953

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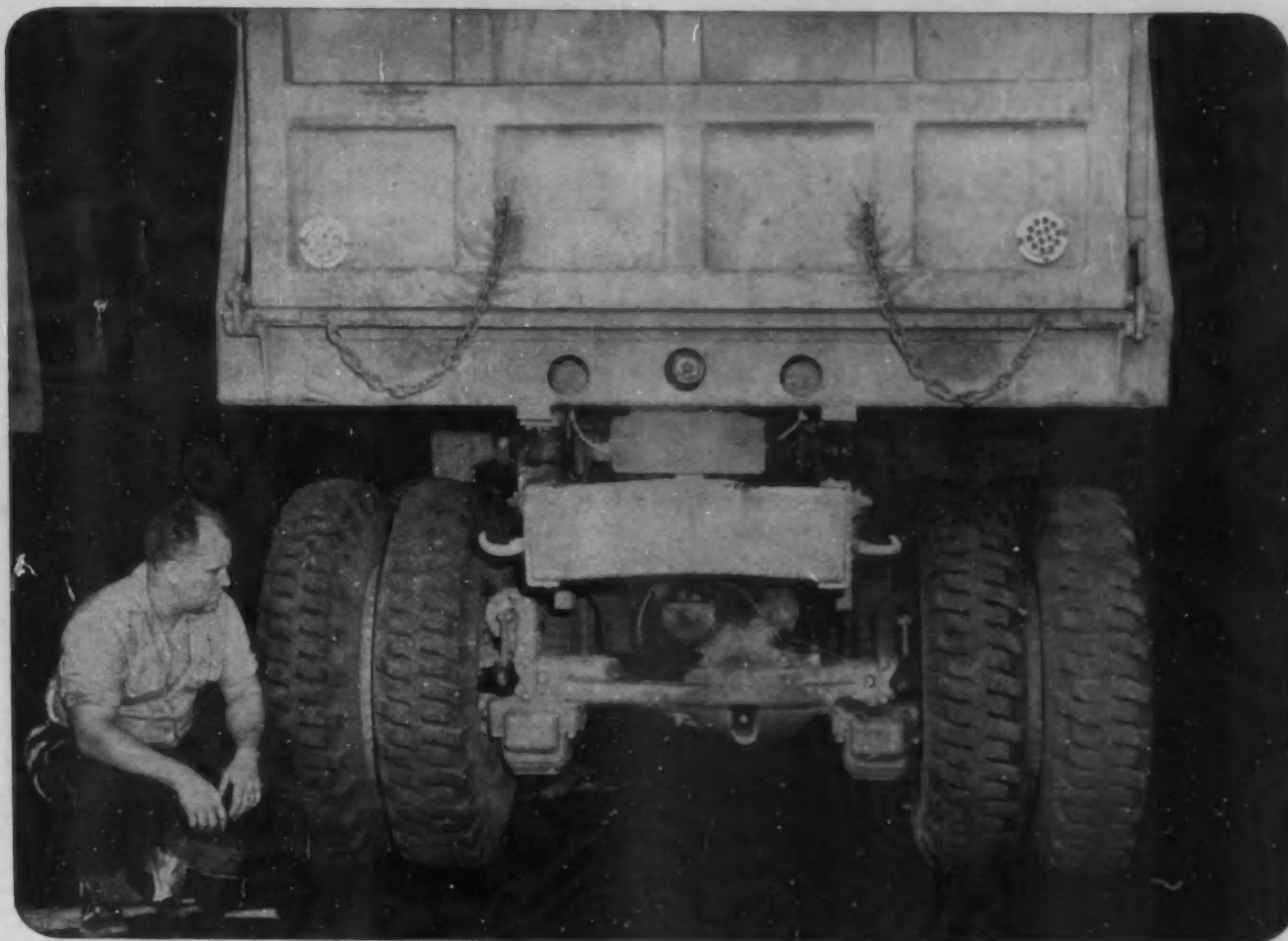
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"We average 80,000 miles on NYLON CORD TIRES hauling 10-ton loads of asphalt"



"Hauling asphalt over rough gravel roads, the tires on our thirty-eight dump trucks take plenty of abuse," says Carl Lizza, vice-

president of Lizza Brothers, Inc., general contractors in Oyster Bay, L. I. "With loads averaging 10 tons, they have a doubly tough job—to support the weight and withstand the constant bruising, too.

"Regular tires just didn't stand up, so in 1948 we equipped our trucks with nylon cords. They've averaged 80,000 miles apiece, taken recaps two and often three times and given us 50% better wear than any tire we've used in eighteen years of business. We have never had a blowout, and from the looks of things never will.

From a dollar standpoint, nylon cords have consistently saved us money and cut the number of tires we need to have in stock."

Whether your fleet is large or small, you can make this test. Try a set of nylon cord tires and see how their remarkable resistance to bruising permits them to take hard body punches and safely support even your heaviest loads. See how they reduce road delays and carcass failure . . . give a lower cost per mile. Ask your dealer about nylon cord tires today. (Du Pont makes nylon fibers, does not produce tires. A number of rubber companies have nylon cord tires available.)

. . .

FREE BOOKLET on nylon tires — write for your copy. Textile Fibers Dept., Room 2520-J-10, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

NYLON CORDS PROTECT AGAINST ALL THESE CAUSES OF TIRE FAILURE

HEAT—Nylon cords can withstand hotter temperatures than a tire will ever encounter on the highway in normal operations.

FLEX FATIGUE—Nylon's resilient strength makes tire cord stand up under the complex compression-tension flexing that takes place every time a tire turns—reduces flex-fatigue failure.

BRUISE DAMAGE—Nylon's toughness virtually ends cord ruptures caused by tires hitting curbs and holes at high speeds.

MOISTURE—Nylon minimizes tire failures caused by moisture seeping into cuts. Nylon's "water resistance" is one of the reasons it's so popular for fishing lines and commercial fishing nets.

DU PONT NYLON for TIRE CORD

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

COMMERCIAL CAR JOURNAL, October, 1953

173

Photos Figure High In Fleet P.R. Programs

AN inexpensive camera can be a valuable piece of a fleet's equipment. Opportunities for using it are frequent, and the value of photographs to your public relations program should never be underestimated.

A line-up of the entire fleet makes a good bet for newspaper and direct mail advertising because it impresses the reader with the size of your firm and with the transportation or delivery service that it can render. If the trucks

By Stuart Covington

are modern and well-maintained, this also will speak well of your organization. Frequently the reader will take time to scan the lettering on the sides of a truck in a photograph when he will ignore the carefully worded copy of an ad.

Dress up your billheads, stationery and envelopes with small photographic reproductions of individual units of your fleet. Besides giving your correspondence a distinctive touch, this artwork will lend it added advertising punch.

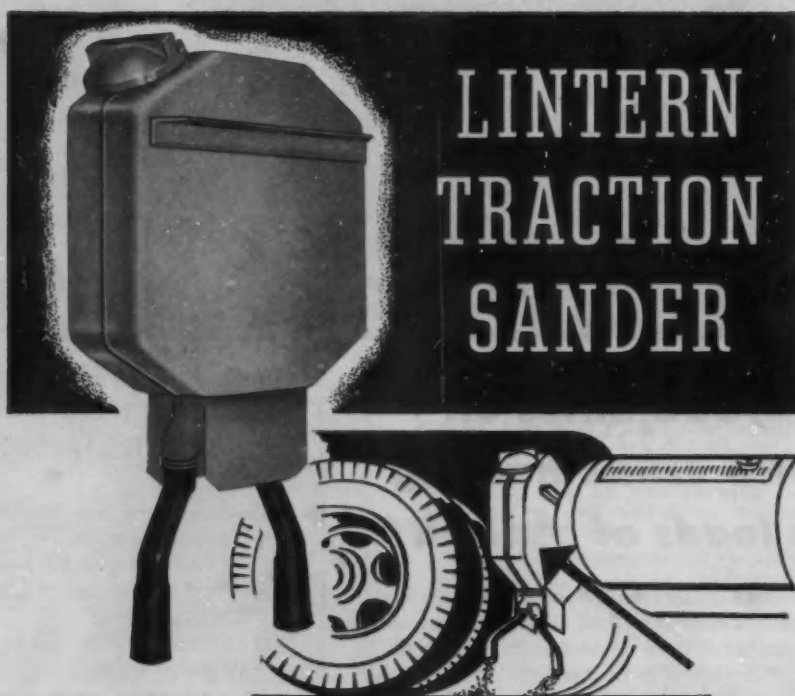
Instead of using a "solid" photograph for this purpose, have the engraver "crop" everything out of the cut he makes except the truck. The result will be a more effective and pleasing reproduction of the truck.

A good fleet line-up can also periodically garner some valuable free publicity; first, through the pages of local newspapers, and second, in regional and national trade journals. The local newspaper publicity will come from the "business review" pages which most metropolitan dailies publish once a week. These pages carry "blurbs" on local firms which are accompanied by photos. The pictures cost the newspaper money, and if they can find a firm ready to supply a photo or cut with no cost to the paper, that firm is likely to get a priority on space on the "business page."

Truck manufacturers offer an opportunity for nationwide publicity by way of the large ads they place regularly in scores of widely distributed magazines. If all of the units in your fleet, or a substantial number of them, are the products of one particular manufacturer, the firm is likely to use the fleet as the basis for one of its maga-

(TURN TO PAGE 176, PLEASE)

Announcing the Improved



By painstaking redesign we have reduced the weight of Lintern Air Operated Traction Sanders without sacrificing any of their distinctive features. This reduction, plus a new lighter weight traction material now available, assures truckers a combination of maximum protection with minimum GVW.

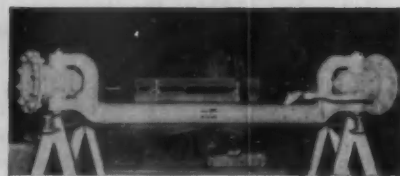
Another important improvement is the use of splash guards to shield the actuating mechanism—thereby making doubly sure these sanders will respond instantly.

Among other features, greatly appreciated by operators, are the patented, weatherproof nozzles and the "DEMOIST" absorbers attached to the tightly sealing fill caps. Hand control valve or foot control operation, as you wish. Air operated for utmost dependability, "as dependable as your brakes".

Probably no investment you can make will offer you such great protection at so little cost — and insure over-the-road safety in slippery, icy weather. Ask for new Bulletin 5307.

THE LINTERN CORPORATION
ROUTE 20, EAST • PAINESVILLE, OHIO

Centerline Front Axle

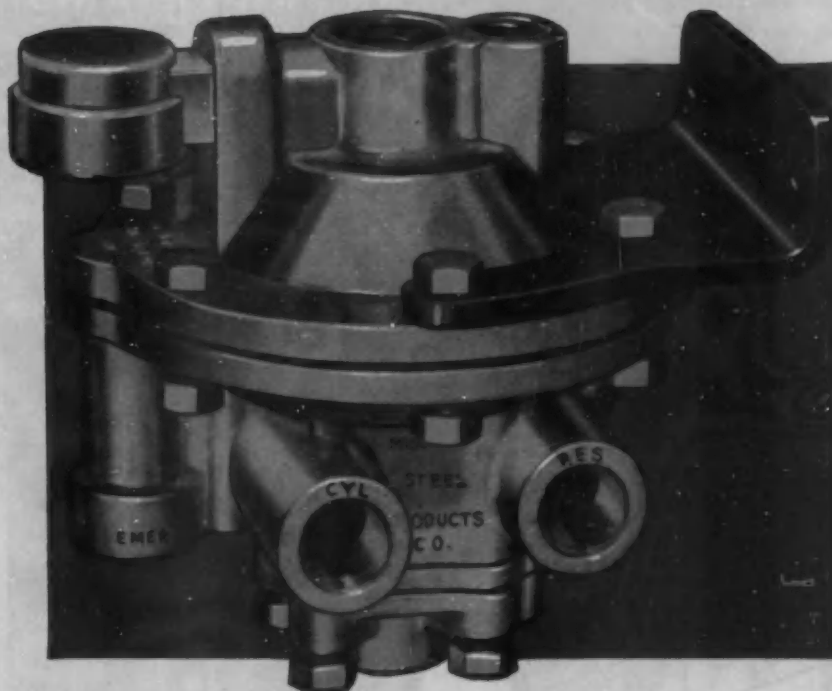


Page and Page Co., Portland, Ore., are now producing a "Gyroscopic" front axle. Instead of having the turning radius just inside each front wheel, the steering turning radius on the new axle is on the centerline of each front wheel. Advantages claimed are elimination of wheel snap when one front wheel hits a bump or rut and greater stability in case of a tire blowout.

AGAIN MIDLAND LEADS

MIDLAND BREAK-AWAY *Safety* CONTROL...

simplest way to get



SAFE, SURE PROTECTION IN CASE OF A BREAK-AWAY!

Required by ICC—Required on all tractors built after June 30, 1953.

Only Four Units—Fully-automatic Break-Away Valve, Instant-acting Reservoir Check Valve, Automatic Low Pressure Switch, dependable warning Buzzer and attaching tubing and fittings. *All thoroughly proved in service.*

Fully Automatic—Break-away system is fully automatic and brake function is fully restored after vehicles have been reconnected.

Nothing New To Learn—Driver has only to apply service brakes in usual manner. *No additional controls to operate.*

Available in Complete Kits.

THE MIDLAND STEEL PRODUCTS COMPANY

3641 E. MILWAUKEE AVE. • DETROIT 11, MICH.
Export Department: 38 Pearl St., New York, N. Y.



IF TRAILER BREAKS AWAY from the tractor, warning buzzer sounds . . . Midland instant-acting Reservoir Check Valve automatically seals air supply, providing tractor with sufficient reserve . . . Midland Break-Away Valve permits tractor brakes to be applied to bring tractor to a safe stop . . . trailer braking system automatically applies emergency feature to stop trailer.

PROVED POWER BRAKE PARTS BY MIDLAND

Like all of Midland's full line of Air and Vacuum Power Brake Equipment, these units have been fully tested and proved in service. They can be depended upon for safe, sure stops.

**Those who know Power Brakes
CHOOSE MIDLAND**

See Your Local Midland Distributor

GO MIDLAND

AND STOP SAFELY!

Fleet P.R. Programs

Continued from Page 174

zine ads, running a photo of your fleet together with the name and address of your company and perhaps a brief description of its scope of operations. Complete fleet lineups are difficult to obtain, because it requires some deft maneuvering of assignments to get every truck "back home" and manned with a driver at a particular time. Thus

the advertiser is likely to welcome such a photo of its equipment in actual use. If he knows that such a photo exists, the manufacturer's local dealer is likely to suggest the picture's use for joint publicity purposes of his company and yours.

Fleet-owners engaged in the heavy hauling business will find an additional target for the camera's eye. Occasionally they will be employed to handle odd or outside loads, such as heavy transformers, houses, large tanks or parts of steel towers. On such occasions, a photographer should be on hand to take pic-

tures of the load from several angles. These photos can serve several purposes. Newspapers will frequently publish them as spot news. Trade journals may publish them for a like reason. They make excellent advertising material and interesting permanent records for the firm. A framed 8' x 10 photo of a big hauling job is always an attractive addition to the office wall.

Although it isn't common practice, a photo file might also be kept on all employees for identification and advertising purposes. Full face "mug shots" are the most suitable employee photos. Occasionally, a driver's photo may be wanted for newspaper publication in connection with the awarding of a safety trophy or other commendation. Employees' photos can sometimes be used to advantage in newspaper advertising.

The technique used in photographing fleet lineups is probably familiar to most truckers. Trucks are "staggered" so that part or all of the cab of each truck extends beyond the truck in front of it. In other cases, a front view is shot from the approximate center of the lineup. However, if it is the intent of the photo to reveal the size of the fleet's units, a side view will naturally be necessary. Some fleet operators prefer to turn their trailer rigs so that tractor and trailer are jackknifed at about a 30° angle. In lineups, high trucks should, of course, be placed in the rear, with lower trucks and pickups to the front. The same principle applies to long and short trucks. Should your own yard area be insufficiently large to permit a full lineup, arrangements can probably be made with officials of an uptown parking lot, the local fairgrounds or a similar arena to have the photos made on their premises.

Photos of individual rigs do not require advance planning, but care should be taken that the sun is shining on the side of the truck in such a manner that the wheels and undergear will not be hidden in heavy shadows.

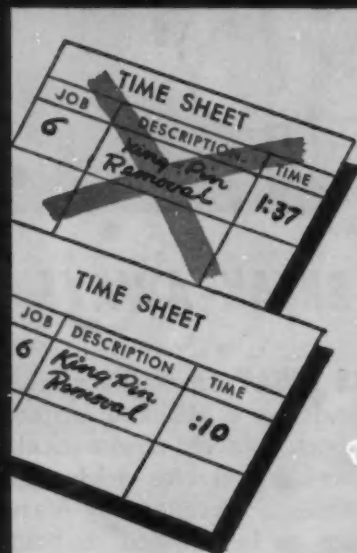
Photography properly used is the key to greater efficiency, public relations potentialities and security for the fleet owner. Try it, and prove it to yourself.

LIFT TRUCK OPERATOR: "Boy, oh boy, you should see my new girl. She is as beautiful as a mirage."

SECOND DITTO: "That's wrong. A mirage is something you can see but you can't get your hands on."

FIRST L. T. Operator: "That's my girl!"

NOW! PUSH KING-PINS IN MINUTES



WITH THE

NEW

OTC

HYDRAULIC KING-PIN PUSHER

Designed with the famous OTC CENTER-HOLE, the 17½ ton ram with its accessories will pull or install cylinder sleeves, shafts, bearings, gears, etc. Completely portable (only 10 lbs.), it does scores of automotive jobs.



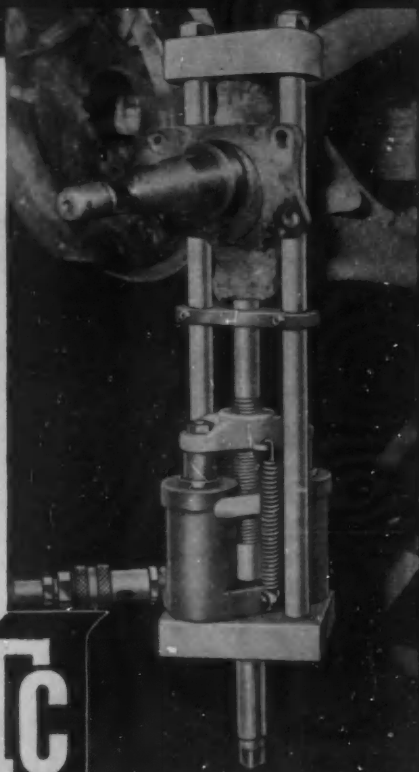
OWATONNA TOOL COMPANY

341 CEDAR STREET • OWATONNA, MINNESOTA

From hours to minutes—for a king-pin job. With the OTC 17½ Ton Power-Twin and King-Pin Pusher, you remove car and truck king-pins 75% faster. No hammering and damaging parts—no torque to work against—you do the job 90% easier. Now this time consuming job can be done at a profit on a flat rate basis, and the tool is paid for in a few jobs. Ask your dealer for a demonstration.

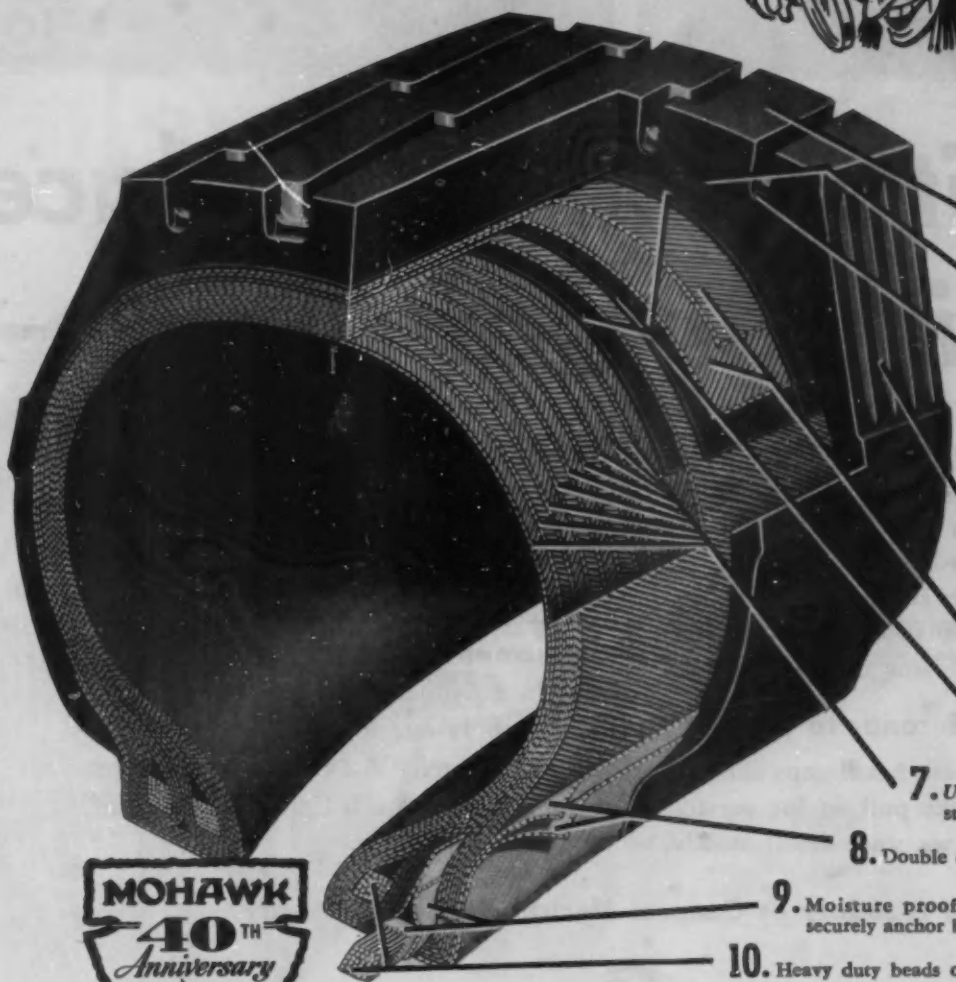
Booklet describes complete line and uses of OTC Tools

WRITE
FOR
FREE
BOOKLET



"Inside Story" on
the greater mileage of
MOHAWK SUPER CHIEF
Truck Tires

see for yourself:



1. Deep Natural Rubber Tread—long wearing, cool running, non-skidding.
2. Specially compounded under-tread . . . ideal for several recappings.
3. Exclusive Rib Design . . . Advantages:
*Small cracks will not lengthen.
*As outer tread wears, small ribs contact road for longer skid protection.
*You are warned to recap when small ribs wear smooth.
4. Hundreds of Shoulder Vents dissipate heat, make tire run cooler, last longer.
5. Double Breaker Strips and
6. Triple Cushion Protectors guard against road shock.
7. Uniform ply tension eliminates unequal stress, a common cause of carcass failures.
8. Double chafers prevent rim chafing.
9. Moisture proof, double wrap flippers securely anchor beads into carcass.
10. Heavy duty beads of high carbon steel.



THE MOHAWK RUBBER COMPANY

PLANTS: Akron, Ohio • Littleton, Colorado
EXPORT DEPARTMENT: 1819 Broadway, New York 23, N. Y. • Cable: "Mohawk" New York

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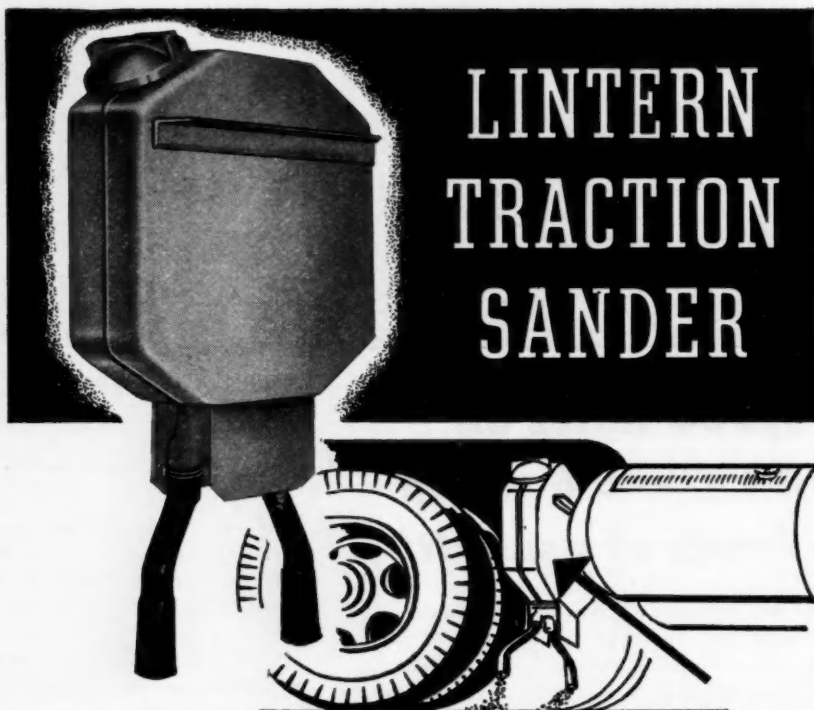
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ROUTE 20, EAST • PAINESVILLE, OHIO

Centerline Front Axle

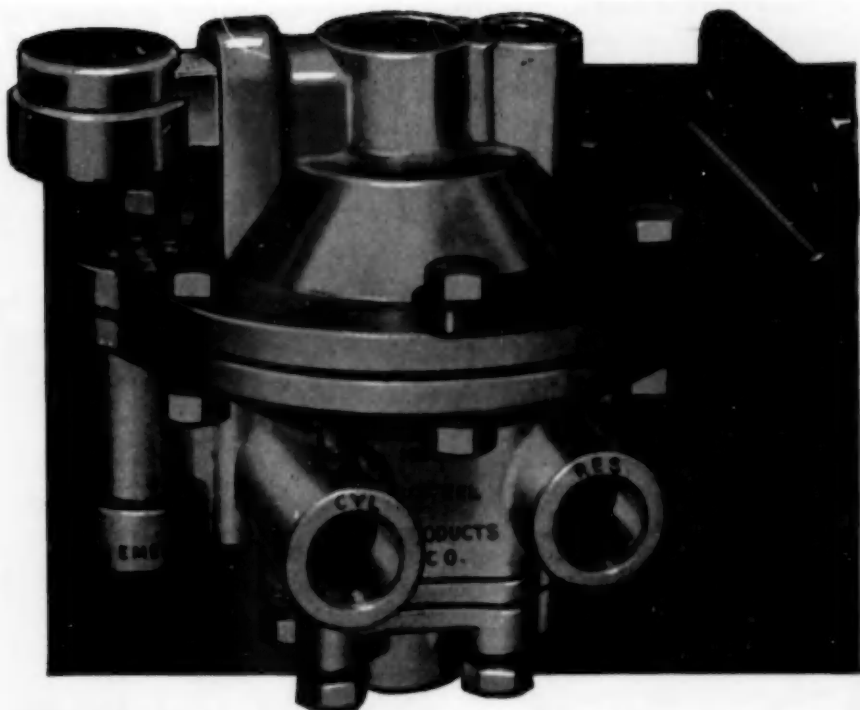


Page and Page Co., Portland, Ore., are now producing a "Gyroscopic" front axle. Instead of having the turning radius just inside each front wheel, the steering turning radius on the new axle is on the centerline of each front wheel. Advantages claimed are elimination of wheel snap when one front wheel hits a bump or rut and greater stability in case of a tire blowout.

AGAIN MIDLAND LEADS

MIDLAND BREAK-AWAY *Safety* CONTROL...

simplest way to get



SAFE, SURE PROTECTION IN CASE OF A BREAK-AWAY!

Required by I C C— Required on all tractors built after June 30, 1953.

Only Four Units—Fully-automatic Break-Away Valve, Instant-acting Reservoir Check Valve, Automatic Low Pressure Switch, dependable warning Buzzer and attaching tubing and fittings. *All thoroughly proved in service.*

Fully Automatic—Break-away system is fully automatic and brake function is fully restored after vehicles have been reconnected.

Nothing New To Learn—Driver has only to apply service brakes in usual manner. *No additional controls to operate.*

Available in Complete Kits.

THE MIDLAND STEEL PRODUCTS COMPANY

3641 E. MILWAUKEE AVE. • DETROIT 11, MICH.

Export Department: 38 Pearl St., New York, N. Y.



IF TRAILER BREAKS AWAY from the tractor, warning buzzer sounds . . . Midland instant-acting Reservoir Check Valve automatically seals air supply, providing tractor with sufficient reserve . . . Midland Break-Away Valve permits tractor brakes to be applied to bring tractor to a safe stop . . . trailer braking system automatically applies emergency feature to stop trailer.

PROVED POWER BRAKE PARTS BY MIDLAND

Like all of Midland's full line of Air and Vacuum Power Brake Equipment, these units have been fully tested and proved in service. They can be depended upon for safe, sure stops.

**Those who know Power Brakes
CHOOSE MIDLAND**

See Your Local Midland Distributor

GO MIDLAND

AND STOP SAFELY!

Fleet P.R. Programs

Continued from Page 174

zine ads, running a photo of your fleet together with the name and address of your company and perhaps a brief description of its scope of operations. Complete fleet lineups are difficult to obtain, because it requires some deft maneuvering of assignments to get every truck "back home" and manned with a driver at a particular time. Thus

the advertiser is likely to welcome such a photo of its equipment in actual use. If he knows that such a photo exists, the manufacturer's local dealer is likely to suggest the picture's use for joint publicity purposes of his company and yours.

Fleet-owners engaged in the heavy hauling business will find an additional target for the camera's eye. Occasionally they will be employed to handle odd or outsize loads, such as heavy transformers, houses, large tanks or parts of steel towers. On such occasions, a photographer should be on hand to take pic-

tures of the load from several angles. These photos can serve several purposes. Newspapers will frequently publish them as spot news. Trade journals may publish them for a like reason. They make excellent advertising material and interesting permanent records for the firm. A framed 8 x 10 photo of a big hauling job is always an attractive addition to the office wall.

Although it isn't common practice, a photo file might also be kept on all employees for identification and advertising purposes. Full face "mug shots" are the most suitable employee photos. Occasionally, a driver's photo may be wanted for newspaper publication in connection with the awarding of a safety trophy or other commendation. Employees' photos can sometimes be used to advantage in newspaper advertising.

The technique used in photographing fleet lineups is probably familiar to most truckers. Trucks are "staggered" so that part or all of the cab of each truck extends beyond the truck in front of it. In other cases, a front view is shot from the approximate center of the lineup. However, if it is the intent of the photo to reveal the size of the fleet's units, a side view will naturally be necessary. Some fleet operators prefer to turn their trailer rigs so that tractor and trailer are jackknifed at about a 30° angle. In lineups, high trucks should, of course, be placed in the rear, with lower trucks and pickups to the front. The same principle applies to long and short trucks. Should your own yard area be insufficiently large to permit a full lineup, arrangements can probably be made with officials of an uptown parking lot, the local fairgrounds or a similar arena to have the photos made on their premises.

Photos of individual rigs do not require advance planning, but care should be taken that the sun is shining on the side of the truck in such a manner that the wheels and undergear will not be hidden in heavy shadows.

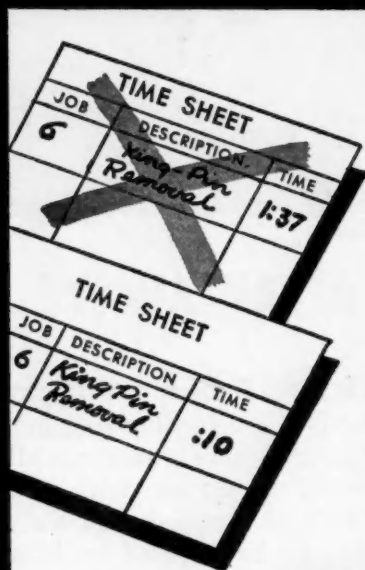
Photography properly used is the key to greater efficiency, public relations potentialities and security for the fleet owner. Try it, and prove it to yourself.

LIFT TRUCK OPERATOR: "Boy, oh boy, you should see my new girl. She is as beautiful as a mirage."

SECOND DITTO: "That's wrong. A mirage is something you can see but you can't get your hands on."

FIRST L. T. Operator: "That's my girl!"

NOW! PUSH KING-PINS IN MINUTES



WITH THE

NEW OTC

HYDRAULIC KING-PIN PUSHER

Designed with the famous OTC CENTER-HOLE, the 17½ ton ram with its accessories will pull or install cylinder sleeves, shafts, bearings, gears, etc. Completely portable (only 10 lbs.), it does scores of automotive jobs.



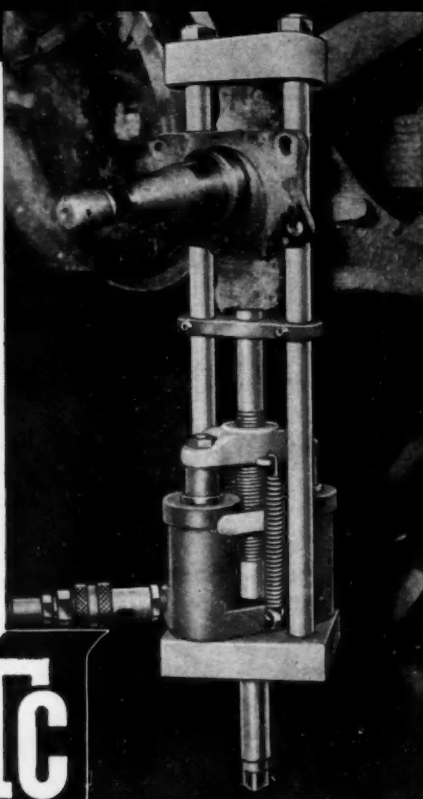
OWATONNA TOOL COMPANY

341 CEDAR STREET • OWATONNA, MINNESOTA

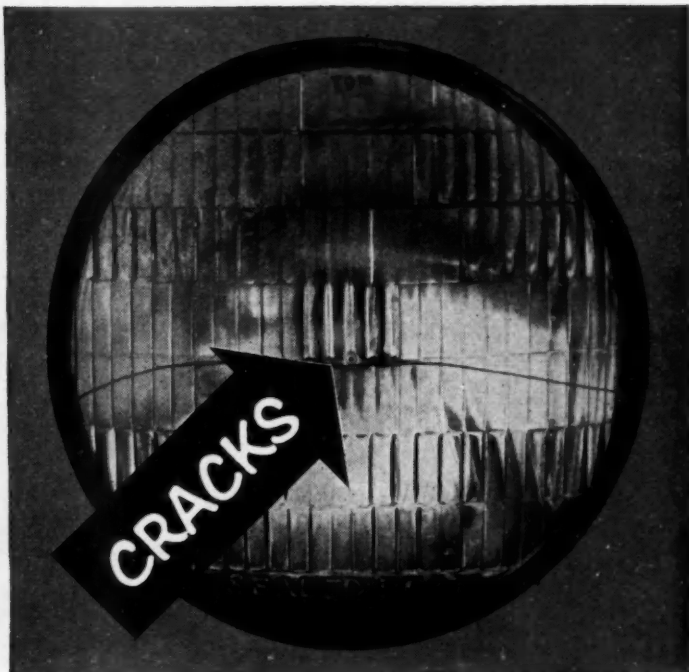
From hours to minutes—for a king-pin job. With the OTC 17½ Ton Power-Twin and King-Pin Pusher, you remove car and truck king-pins 75% faster. No hammering and damaging parts—no torque to work against—you do the job 90% easier. Now this time consuming job can be done at a profit on a flat rate basis, and the tool is paid for in a few jobs. Ask your dealer for a demonstration.

Booklet describes complete line and uses of OTC Tools

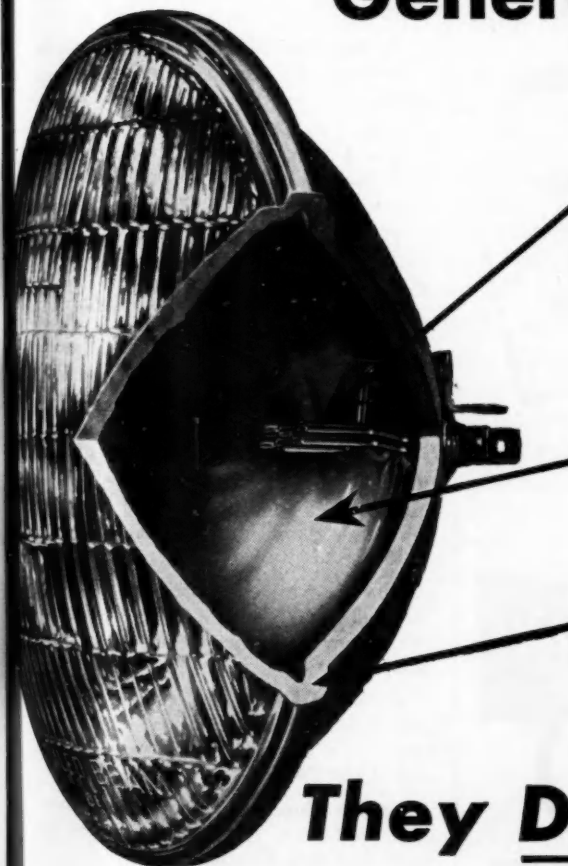
WRITE
FOR
FREE
BOOKLET



lamps like these...



General Electric "All-Glass" Headlamps



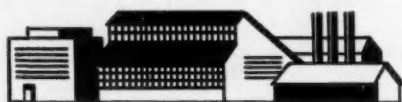
NO INNER BULB TO BLACKEN
Headlamp is *one big bulb*. Rugged filaments replace inner bulb, can't shake loose.

MIRROR-LIKE REFLECTOR
It's built in, stays bright. Assures maximum light output for years of driving safety.

ALL ONE PIECE
All-Glass construction keeps out dirt, moisture. Eliminates tarnish and rust.

They DO NOT GROW DIM!

FACTORY FLASHES



B. F. Goodrich Co., Akron, Ohio, has announced a \$9,000,000 expansion at its Oaks, Pa., plant.

B. F. Goodrich Co., Akron, Ohio, has announced a \$4,500,000 expansion for its Tuscaloosa, Ala., tire and tube manufacturing plant.

Monroe Auto Equipment Co., Monroe, Mich., will build a new research and development building. Space formerly occupied by the department will be used for power steering production.

S & M Lamp Co., Los Angeles, Cal., will be represented in the southeast by Lawrence M. Hirsig and Co.

Minnesota Mining and Mfg. Co., St. Paul, Minn., has purchased Irvington

Varnish and Insulator Co., Irvington, N. J. It will become a division of Minnesota Mining and Mfg.

Yankee Metal Products, Norwalk, Conn., has selected Charles P. Cathcart as winner of its annual safety scholarship to the William Hood Dunwoody Industrial Institute.

McDougall-Butler Co., Inc., Buffalo, N. Y., has moved its New England warehouse to North Cambridge, Mass. It was located in Salem.

Detroit and Cleveland Navigation Co., with a controlling interest in Denver Chicago Trucking Co., has bought a nine per cent stock interest in Fruehauf Trailer Co., Detroit.

American-La Foamite Corp., Elmira, N. Y., has announced a change in fire extinguisher labels. The new labels show in pictures and words how to operate the unit.

Buda Co., Harvey, Ill., shareholders met last month to consider a plan to exchange the company's assets for shares of stock of Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Clark Equipment Co., Buchanan, Mich., has established a \$2,000 scholarship fund at the Illinois Institute of Technology for students majoring in materials handling.

Caterpillar Tractor Co., Peoria, Ill., has formed a new Engine Division.

Chain Belt Co., Milwaukee, Wis., has announced purchase of Shafer Bearing Corp., Downers Grove, Ill. It will continue operation as a division of Chain Belt.

Jones and Laughlin Steel Corp., Pittsburgh, Pa., has changed the trade name of its "Otiscoloy" steels to "Jalten."

GMC Truck and Coach Division, General Motors Corp., Pontiac, Mich., has completed delivery of 1400 trucks under a \$3,740,000 U. S. Navy contract.

Tung-Sol Sales Corp. has opened a new warehouse at 755 West Foodale Blvd., Columbus 8, Ohio.

South Bend Lathe Works, South Bend, Ind., are now offering scale model machine tools to assist in planning shop layouts. They are made to a scale of 1/2 in. to 1 ft.

General Motors Corp., after the fire that burnt out its Livonia, Mich., Hydraulic transmission plant, leased space for the unit's production in Kaiser-Frazer's Willow Run plant.

Electric Storage Battery Co., Philadelphia, has announced establishment of two operating divisions—industrial and automotive.

Timken-Detroit Axle Co. and Standard Steel Spring Co. have been combined into one unit, Rockwell Spring and Axle Co.

Topper Equipment Co., Clark Township (Rahway), N. Y., has changed its name to Circo Equipment Co.

TO **SWING** THOSE DOORS,
LARGE or SMALL,
USE **E** HINGES on them ALL!

REFRIGERATOR
PANEL BODY HINGES



FOR ROUND CORNER
BODIES



Eberhard offers a complete line of truck body hinges, designed and made to withstand the wear and tear of abnormal usage. Write for the Catalog. Refer to it for all your automotive hardware needs.

EBERHARD *Long Run*
TRUCK BODY FITTINGS

EBERHARD MANUFACTURING CO.

Division of the Eastern Malleable Iron Co.

EVARTS AVENUE

CLEVELAND, OHIO





Where the going is roughest... Alcoa Forged Aluminum Disc Wheels!

"In mountain logging," says Earl Raddatz of Fresno, California, "maximum strength is needed throughout the unit. But the wheels must demonstrate superior strength. I have watched other truckers switch from steel to Alcoa Forged Aluminum Disc Wheels* and decided to make the change myself!"

Superior strength is only one of the advantages Earl Raddatz will realize as the miles pile up. Look at these others:

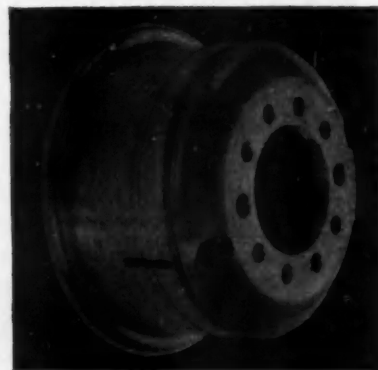
LIGHTWEIGHT! Alcoa Forged Aluminum Disc Wheels weigh 32 to 50 pounds less per wheel than corresponding steel wheels. Savings in unsprung weight mean reduced wear and tear on chassis and tires.

TRUE-RUNNING! Alcoa Forged Aluminum Disc Wheels are precision-made, machined to close tolerances. Results—better balance, truer running qualities that mean easier steering, longer tire life, a smoother ride.

RAPID HEAT DISSIPATION! Tire temperatures are kept lower because one-piece Alcoa Forged Aluminum Wheels conduct heat rapidly away from tires. Tires that run cooler give greater mileage.

MINIMUM MAINTENANCE! Alcoa Forged Aluminum Disc Wheels resist corrosion—never need painting. Tire changing is easier because there is no rust. Rim surfaces remain smooth so tire beads loosen easily during tire changing. Aluminum Company of America, 1871-K Alcoa Building, Pittsburgh 19, Pa.

Forged Disc



**Mr. Raddatz purchased his units from Reliable Automotive Co., Fresno, California.*

Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA

FLEET NOTES

Super Service Motor Freight, Inc., Nashville, Tenn., has opened a new terminal in Baltimore, Md.

Denver Chicago Trucking Co., Denver, Colo., are now using a fleet of 50 Diamond T tractors.

California Cartage Co., Los Angeles, Cal., opened a new terminal last month in San Diego, Cal.

Cincinnati Transit Co., Cincinnati, Ohio, recently put into service 18 new buses equipped with air suspension in place of springs.

Third Avenue Transit Corp., New York City, expected to put in service last month 10 50-passenger and 15 44-passenger buses.

Chicago Transit Authority, Chicago, last month called for bids on 100 additional propane operated buses.

Buffalo Transit Co., Buffalo, N. Y., has scheduled 14 new buses to be in service by Labor Day.

Department of Street Railways, Detroit, has signed a \$2 million contract for 100 51-passenger buses.

Bekins Moving and Storage Co., with offices in Washington, Oregon, Colorado, Idaho and British Columbia, celebrated its 50th anniversary last month. The company opened in Seattle, Wash., in 1903, now has 58 warehouses in 11 western states, operates in all 48.

Kingsway Transpors, Ltd., Montreal, Canada, truck line subsidiary of Canada Steamship Lines, has purchased Colossal Lines Ltd., New York, to provide service from Canada into New York state.

Ward Trucking Co., Altoona, Pa., recently presented a Guernsey calf to the Holidaysburg, Pa., chapter of the Future Farmers of America. A similar presentation is planned for the Blair County, Pa., 4H Guernsey Club.

Johnson Motor Lines, Charlotte, N. C., has put into service a fully equipped mobile safety clinic for driver and employee testing throughout the system.

Akers Moeor Lines, Gastonia, N. C., has opened its new terminal in Secaucus, N. J.

T. S. C. Motor Freight Line, Inc., Houston, Texas, is now operating from its new \$500,000 New Orleans, La., terminal.

Central Van and Storage Co. has begun construction on a \$250,000 warehouse in Nashville, Tenn.

U. S. Truck Co., Inc., Detroit, recently purchased 25 more semi-trailers and plans a new terminal in Livonia, Mich.

Wilson Freight Forwarding Co., Cincinnati, Ohio, put into operation a new terminal in Wallingford, Conn.

Interstate Motor Lines, Inc., Salt Lake City, Utah, has moved into its new \$250,000 Chicago terminal.

Akers Motor Lines, Gastonia, N. C., has opened its new terminal in Savannah, Ga., a part of the company's \$2,000,000 expansion and modernization program.

Interstate Motor Freight System has completed an \$82,000 improvement program at its Grand Rapids, Mich., terminal.

Denver Chicago Trucking Co., Inc., Denver, Colo., has a \$160,000 expansion project in the works for its Chicago terminal.

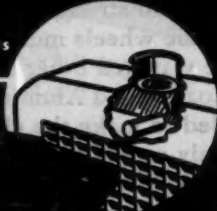
R-C Motor Lines, Inc., has announced plans for a new \$70,000 terminal, expected to be in operation by mid-December, in Savannah, Ga.

FLEET OPERATORS! eliminate expense due to overheating engines... install...

Sola-Cell

THE AMAZING CATALYTIC CELL THAT REMOVES SCALE & REDUCES RUST IN ENGINE COOLING SYSTEMS

No installation problem... just place Sola-Cell in radiators



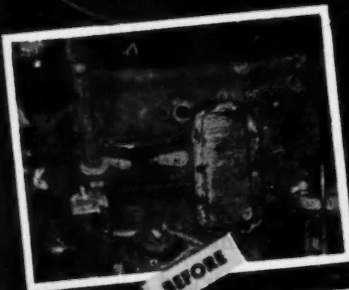
Cell is 2 3/16" long,
5/8" in diameter

- Removes Scale ● Reduces Rust
- Allows Maximum Engine Performance
- Reduces Friction and Wear
- Cleans Radiator & Cooling System
- Helps Prevent Overheating
- Guaranteed for 2 Years

STOPS ENGINE OVERHEATING DUE TO SCALE AND CORROSION IN—

- AUTOS • TRUCKS • TRACTORS
- BUSES • STATIONARY ENGINES

Unretouched photographs of the engine block of a bus in the fleet of the City Bus Company, Oklahoma City, taken 50 days apart. Note particularly in the picture below how the Sola Auto Cell has completely unclogged the hole in the upper right-hand corner, and how scale has been greatly reduced between the cylinder walls in the water jacket.



Thousands in operation... proof of performance supplied on request

No. of Units	Shipping Weight
8	9 oz.
16	1 lb., 2 oz.
24	1 lb., 11 oz.
144	10 lbs., 2 oz.

Shipped F.O.B. Oklahoma City

HALES-MULLALY, CO. SOLA DIVISION
3110 NORTH WALKER OKLAHOMA CITY, OKLA.

Biggest seller in its class!



Deluxe (extra cost) shown

HERE'S WHY

This axle-to-axle check shows Ford's the
standout value in the 22,000-lb. G.V.W. class

ADVANTAGES	FORD MODEL F-800	OTHER LEADING MAKES					
		A	B	C	D	E	F
Maximum body and payload —15,366 lbs. or more	✓		✓		✓	✓	
Wheelbases: five or more	✓	✓	✓		✓	✓	
Front axle: Capacity—7000 lbs. or more Tread—69.24 in. or wider	✓	✓	✓		✓	✓	
Brakes: Vacuum hydraulic—lining area 485 sq. in. or more Air—lining area 534 sq. in. or more	✓		✓		✓	✓	
Cab: Deluxe cab available Curved one-piece windshield Total glass area—2103 sq. in. or more Hip room—60.75 in. or more Seat shock snubbers	✓	✓	✓		✓	✓	
Engine: V-8 type Max. horsepower—155 or more Horsepower per cubic inch displacement—0.488 or more Max. torque—284 lbs. or more	✓		✓				
Frame: Side rail depth—9 in. or more Inside reinforcement Section modulus—13.83 or more	✓	✓	✓	✓		✓	
Springs: Front—total capacity (at pad)— 4500 lbs. or more Rear—total capacity (at pad)— 17,400 lbs. or more	✓	✓	✓	✓		✓	N.P.
Turning diameter (short wb.): 45.1 ft. or less	✓	✓	✓	✓		✓	N.P.
Transmissions: Synchronized type 5-speed direct or overdrive available	✓	✓	✓	✓	✓	✓	✓
Rear axle: Capacity—17,000 lbs. or more	✓	✓	✓	✓	✓	✓	N.P.

N.P.—Not Published

Above data based on latest information available as of 8-24-53

Ton-mile master of the Ford Truck line . . . with the most power, yet priced with the lowest in its performance class! No wonder the F-800 Big JOB is now the biggest seller in its class. It's powered by the ultra-modern, overhead-valve 155-h.p. *Cargo King* V-8. Handles just about any special-purpose body and payload. G.C.W. rating 48,000 lbs. New *Driverized* Cab cuts fatigue, increases driver efficiency.

FORD ECONOMY TRUCKS

SAVE TIME

SAVE MONEY

LAST LONGER

FREE! MAIL THIS COUPON NOW!

FORD Division of FORD MOTOR COMPANY
P.O. Box 658, Dearborn, Michigan

Please send me without charge or obligation, complete details on new Ford Economy Trucks for '53!

FULL LINE ☐

HEAVY-DUTY MODELS ☐

LIGHT MODELS ☐

BIG JOB MODELS ☐

PARCEL DELIVERY ☐

CAB FORWARD MODELS ☐

Name _____
(PLEASE PRINT PLAINLY)

Address _____

City _____ State _____

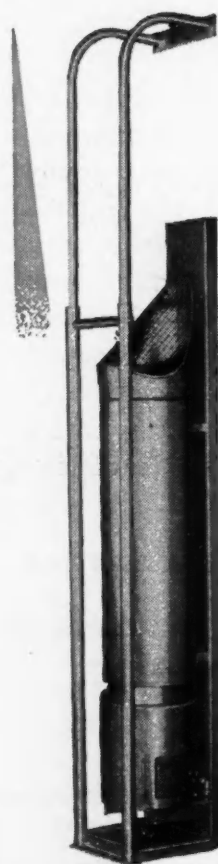
T-1 ☐ Check here if student ☐



INTRODUCING . . .

... Jack E. Lawson, as Detroit area sales representative, Circo Equipment Co., Rahway, N. J.

... Robert C. Kilbride, as general manager, Valley Motor Lines, Inc., Fresno, Cal.



**'not a single case
last winter of
freezing anything'...**

thanks to



**SAFE, DEPENDABLE
AUTOMATIC
LP-GAS HEAT**

Leading Iowa Wholesale Grocery Firm says:
"Our fleet foremen report that our new Cargo-Guard Heaters are doing a very good job. We load our fresh produce trucks at night and they have to stand out in all weathers from 1:00 A. M. to 7:00 A. M. until the drivers come to work. We did not have a single instance last winter of freezing anything, which speaks well for Cargo-Guard."

**At the dock, delayed
or in transit . . .** in the biggest box, in the coldest weather . . . Cargo-Guard protects your shipments with a constant flow of clean, even Gas heat for an average cost of only 2 1/2¢ an hour!

Cargo-Guard meets all ICC requirements

ASK! Phone or wire for full facts. Or use handy coupon.

CARGO-GUARD COMPANY

Thompson's Point, Portland 2, Maine

Please send me information at once on Cargo-Guard LP-Gas Truck Heater.

Name

Company

Street

City Zone State

... R. J. Patrick, as truck tire sales manager, Dayton Rubber Co., Dayton, Ohio.

... Wendell E. Simpson, as vice president, Associated Transport, New York City.

... John P. Barrett, as president, Rodgers Motor Lines, Inc., Scranton, Pa.

... E. F. McGuire, as general manager, Atlas Van Lines, Chicago.

... Jack Matthews, as manager, Motor Transport Labor Relations, Inc., an affiliate of the Philadelphia Chapter, Pennsylvania Motor Truck Assn., Philadelphia.

... Fred J. Grumme, Aero Mayflower Transit Co. maintenance vice president, as president, Indiana Motor Truck Assn., French Lick, Ind.

... Elliot G. Ewell, general sales manager, Mack Motor Truck Corp., as vice president, Mack Trucks, Inc., New York, N. Y.

... Louis Reznick, technical engineer, National Tank Truck Carriers, Inc., Washington, D. C.



... William F. Daugharty, as safety and personnel director, Consolidated Freight Co., Saginaw, Mich.

... Raymond O. Hahn, as Cincinnati, Ohio, branch manager, Highway Trailer Co., Edgerton, Wis.

... Kenneth May, as West coast factory representative, and Newton Eaton, as western plains states sales representative, Dayton Division, Standard-Thomson Corp., Dayton, Ohio.

... James Neary, as southeastern states manager, Standard-Thomson Corp., Dayton, Ohio.



... Robert Ralston, chief field engineer, Grey-Rock Division, Raybestos-Manhattan, Inc., Manheim, Pa.

... George Broughton, as fleet sales manager, and Gilbert F. Stenger, as battery sales manager, Tire and Equipment Division, B. F. Goodrich Co., Akron, Ohio.

... George E. Clark, V. T. Duke and Harry R. Putnam, as Pittsburgh, Pa., Memphis, Tenn., and Chattanooga, Tenn., district representatives respectively, Radiator Specialty Co., Charlotte, N. C.

... T. J. Ault, as vice president and assistant general manager, Detroit Gear Division, Borg-Warner Corp., Detroit.

(TURN TO PAGE 187, PLEASE)

Introducing . . .

Continued from Page 184

...William F. Connolly, as eastern division manager, and Charles J. Murphy, as Boston district manager, Spark Plug Division, Electric Auto-Lite Co., Toledo, Ohio.

...S. F. Coffman, as supervising engineer, Minnesota Highway study, Highways Division, Automotive Safety Foundation, Washington, D. C.

...Mark L. Shepard, as manager, Richmond Division, Gar Wood Industries, Inc., Richmond, Cal.



...Charles G. Anderson, left, and William H. Witham, right, regional truck managers in Chicago and Greensboro respectively, Dodge Division, Chrysler Corp., Detroit.

...L. W. Gay, as Cleveland, Ohio, branch manager, Electric Storage Battery Co., Philadelphia.

...S. A. Copeland, W. M. Earl and F. W. Seaback, as Boston, Mass., Buffalo, N. Y., and Providence, R. I., branch managers respectively, Lee Tire and Rubber Co. of New York, Inc., Conshohocken, Pa.

...Cyril J. Marx, as oil company sales manager, Seiberling Rubber Co., Akron, Ohio.

...Fred J. Fandrei, as Minnesota and North Dakota district representative, Grey-Rock Division, Raybestos-Manhattan, Inc., Manheim, Pa.

...Robert L. Somerville, as general manager, automotive products division, Electric Storage Battery Co., Philadelphia.

...C. A. Stutzman, as merchandising manager, Lubricating Equipment Division, Aero Equipment Corp., Bryan, Ohio.

...Correy Dykstra, as used trailer department manager, Chicago factory branch, Trailmobile, Inc., Cincinnati, Ohio.

...Horton Conrad, as field sales manager, Cargo-Guard Co., Thompson's Point, Portland, Me.

...A. R. Abelt, as vice president—sales, and Gilbert J. Schuelke, as Chain and Transmission division sales manager, Chain Belt Co., Milwaukee, Wis.

...Charles T. Conner, as south-central district sales manager, Twin Coach Co., Kent, Ohio.

(TURN TO PAGE 188, PLEASE)

Model N 235 Truck and Bus Automatic Cancelling Directional Signal Switch



Arrow's New Automatic Cancelling Directional Signal Switch For Trucks and Buses

RUGGED

**CAN'T
BURN OUT**

**FULLY
GUARANTEED**

- Fits all trucks and buses; easily installed; extra heavy duty brackets.
- Switch cannot cancel out until wheel is turned a full 60° in opposite direction.
- Red pilot indicator and audible click. Switch can be manually cancelled.
- Cannot be burned out; protected by fuse in line.
- Modern styling, with baked enamel finish, attractive plastic handle—8 3/8" overall length.
- Available for 6- and 12-volt systems and in the famous Magnalite signal kits.

**GET A FREE ARROW CATALOG
FROM YOUR JOBBER**

See the complete line of Safety After Dark equipment Arrow offers you!



Flasher plugs in underside of switch; can be instantly replaced.

← ARROW →

SAFETY AFTER DARK

**Arrow Safety Device Company
Mt. Holly, New Jersey**



Introducing . . .

Continued from Page 187

... Frank W. Lake, as sales manager, Banite Co., Buffalo, N. Y.

... L. B. McKnight, as president, Chain Belt Co., Milwaukee, Wis.

... Arvin S. Wellborn, as chief engineer, The Asphalt Institute, New York City.

... David C. Gilpatrick, as New England representative, Dorman Products, Inc., Cincinnati, Ohio.

... A. Dix Leeson, as advertising manager, The Budd Co., Philadelphia.

... F. A. Gaffney, as road transport department general manager, Canadian National Railways.

... William F. McIntosh, as Durite Products assistant salesmanager, Chemical Division, Borden Co., Philadelphia.

... Don Carloss, as Memphis, Tenn., automotive division manager, Martin-Senour Co., Chicago.

... William A. Boyer, as sales representative, McDougall-Butler Co., Inc., Buffalo, N. Y.



use only
**FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!**



Repeat business is the foundation on which service profits are built. One of the surest ways to keep customers coming back time and time again is to use only genuine parts in your repair work. When you service Bendix* Drives, be sure to use only *factory new* Bendix Drives and Parts. Your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 85,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

*REG. U.S. PAT. OFF.

Bendix Drive

ECLIPSE MACHINE DIVISION of **Bendix**
ELMIRA, NEW YORK
Export Sales: Bendix International Division, 205 East 42nd St., New York 17, New York

AVIATION CORPORATION



... Robert G. Oakley, left, in charge of truck leasing and sales training, and Harry D. Weller, right, assistant New York regional manager and national accounts sales manager, White Motor Co., Cleveland, Ohio.

... Carl F. Paulsen, as southern district manager, Wayne Division, Gar Wood Industries, Inc., Wayne, Mich.

... Henry G. Milans, as Truck retail sales manager in charge of Chicago factory branch, GMC Truck and Coach Division, General Motors Corp., Pontiac, Mich.

... William M. Kelly, as sales engineer, Eaton Mfg. Co., Detroit.

... W. E. Callahan, central region sales manager, truck division, International Harvester Co., Chicago.



... John T. Davis, as advertising manager, Kent-Moore Organization, Inc., Detroit.

... Keith Minthorne, as sales manager, Super Cel Sponge Division, American Sponge and Chamois Co., Inc., New York City.

(TURN TO PAGE 190, PLEASE)

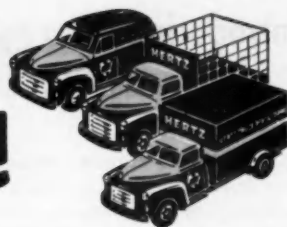
32,000 lb. Tandem Limit



A factory-installed, 9½-cu yd dump body is now available for the heavy duty Reo tandem truck Model No. F-226M. The body, built by the Heil Co., Milwaukee, Wis., is designed to put about 14,000 lb of the payload on the front axle and 32,000 lb on the tandem rear axle, especially important in states with a 32,000 lb limit on tandem axles. The truck is equipped with full power steering.

COMMERCIAL CAR JOURNAL, October, 1953

It costs so little to RENT that extra truck for any kind of hauling job!

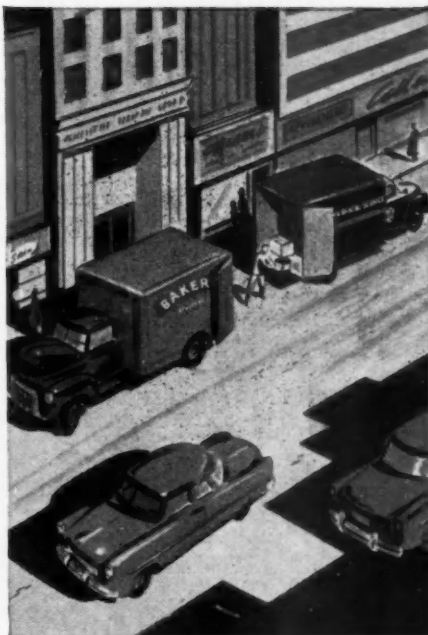


For emergencies... for peak periods... or occasional needs... it's smart... and economical... to rent a truck from Hertz. With the Hertz Truck Service you never have delivery lags... and you save large capital investment in trucks which are often idle. What's more, it saves you many maintenance headaches. All gasoline, oil, Public Liability, Property Damage, Fire and Theft Insurance and \$100.00 deductible collision protection are included in the low rate—at no extra cost. Everything is furnished but the driver. For an hour... a day... for as long as you want... rent your truck from Hertz.

Call
HERTZ



For peak periods... extra heavy loads... or when you need a truck in a hurry for fast load hauling... rent the exactly right truck from Hertz. It's yours on just a few minutes' notice.



In case of emergency... when your own trucks break down or are laid up for repairs... avoid costly delivery lag. Call your nearest Hertz station.



For those occasional hauling needs... when you want a truck for personal or business hauling... do as thousands do. Rent a truck from Hertz. It's easy... convenient... economical.



Short term rent—long term lease. Hertz' Truck Lease Plan, for one truck or a fleet... is a proved plan that releases capital investment, and yet gives every single advantage of ownership, at a cost often less than ownership! For complete information about either short-term renting, or long-term leasing, call your nearest Hertz station, or write to the address below. Learn the facts. You'll profit!

There's no Truck Rental Service as complete as HERTZ SERVICE

Who rents from Hertz? Large corporations, small companies and individuals, too, rent trucks from Hertz. You need only a driver's license and normal identification to rent exactly the kind of truck you need for your specific job. In most of the more than 500 cities in the nationwide Hertz System, fleets of 1/2 ton, 1 ton, 2 ton, pickup, panel, van and stake body trucks are available and are always kept in excellent condition.

How much red tape? None at all! Accredited business firms simply call on the phone, make arrangements, send a driver for the truck. Call your Hertz station any time and rent a truck. In a matter of minutes you or your driver will be on the way! You pay only for actual time and mileage... no hidden charges of any kind.

How small the cost? For example: the rate for the use of a 1/2 ton panel truck for 1 day

in Wilmington, Delaware is only \$7.75, plus 8 cents per mile, including gasoline, oil and insurance. Thus, the total cost for a 50 mile trip is only \$11.75. Rates lower by the week or on a long-term lease. (In some cities, the rates may vary slightly from the above example.)

Rent passenger cars from Hertz, too! Hertz, world's largest, has properly conditioned, current model passenger cars for rent in more than 500 cities throughout the United States, Canada, Alaska, Hawaii, the Virgin Islands, Cuba, Haiti, Mexico, Great Britain, Ireland and Switzerland. Rent a new Chevrolet or other fine car and drive it as your own for as little or long a time as you want! All gasoline and oil are provided—at no extra charge. Public Liability, Property Damage, Fire and Theft Insurance and \$100.00 deductible collision protection are included in the low rate—at no extra cost. Countless thousands rent cars from Hertz for business or pleasure—try it!

Look in your telephone directory under "H" for your nearest Hertz station

National Headquarters: **HERTZ Truck-Rental SYSTEM** Dept. 510, 218 S. Wabash Ave., Chicago 4, Ill., phone: WEBster 9-5165

COMMERCIAL CAR JOURNAL, October, 1953

Introducing . . .

Continued from Page 188

...Joseph A. Hoban, replacement sales vice president, B. F. Goodrich Co., as tire industry representative, Inter-Industry Highway Safety Committee.

...Mrs. Lee S. Worthington, advertising director and secretary, Tranter Mfg. Inc., as a director, National Industrial Advertisers Assn.

...William B. Banta, as sales promotion manager, American Hammered Auto-

motive Replacement Division, Sealed Power Corp., Muskegon, Mich.

...John N. Semanson, as Michigan district manager, Toledo Steel Products Co., Toledo, Ohio.

...William Tauss, as chief field engineer, Brake Drum Division, Copperweld Steel Co., Glassport, Pa.

...Irvin Buntin, Sidney Harris and Frank Parker, Jr., as sales managers in the upper midwest, middle Atlantic and New England divisions respectively, Wilkening Mfg. Co., Philadelphia.

...A. P. Emmert, as Detroit Gear Division general manager, A. W. Rose, as

Pacific Coast representative, and T. L. Knecht, as Borg and Beck Division president, Borg-Warner Corp., Chicago.

...M. D. Archangeli, as Valve and Saginaw Divisions' general sales manager; J. R. Stearns, as Valve Division sales manager, and J. R. Harrison, as Saginaw sales manager, Eaton Mfg. Co., Detroit.

...E. J. Lucas, Jr., as Ohio, Ky., Tenn., W. Va., and Va. representative, Binkley Mfg Co., Warrenton, Mo.

...Garth G. Collins, northeastern district truck sales manager, Twin Coach Co., Kent, Ohio.



...George Chesney, Frank A. Job, Edward T. Lovesky, John Shinnick, H. Allen Cupp, A. J. Millard and Robert Hester, as district managers, Thermoid Co., Trenton, N. J.

...John R. Kix, as district manager, Maremont Automotive Products, Inc., Chicago.

...Grover Whipker, as southern district representative, Automotive Wheel Division, Erie Malleable Iron Co., Erie, Pa.



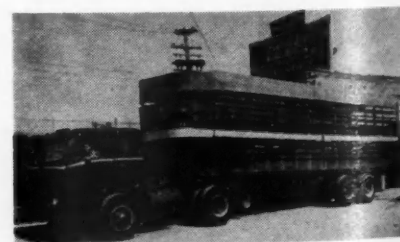
...Robert S. Root, chief engineer, Clutch Division, Lipe-Rollway Corp., Syracuse, N. Y.

...Frank Doherty, as Washington, D. C., sales representative, The Heil Co., Milwaukee, Wis.

...Everett C. Crites, as regional highway engineer, Portland Cement Assn., Chicago.

...Robert C. Crain as vice president and general manager, and D. D. Hodges, as vice president, maintenance, Great Southern Trucking Co., Jacksonville, Fla.

Five Inches of Extra Width



This cattle hauling semi-trailer has an outside width of 8 ft, but its maker, Hobbs Trailer Co., has designed it to provide five additional inches inside width more than standard models.

COMMERCIAL CAR JOURNAL, October, 1953

It's the "Combustion-Wise" Diesel Buyer who saves money today!



When buying a diesel...size, weight, capacity and initial cost are important factors to consider.

But the really smart diesel buyer, with an eye on his profit statement, also considers *operating costs*. That's why more and more diesel buyers are becoming "combustion-wise" and specifying diesels that use the Lanova combustion chamber design. They know that the higher combustion efficiencies of the Lanova System mean "more miles per gallon" and better fuel economy.

The Lanova combustion system boosts operating efficiency two ways. First, it provides a high degree of turbulence in the main combustion chamber, which insures more thorough mixing of fuel with the air needed to support combustion. Second, it *controls and times* the application of pressures to the piston thus providing a longer, more effective thrust during the power stroke.

Write for the Lanova Handbook

This valuable basic textbook on diesel engineering tells the whole combustion story — write for your free copy.



Lanova

LANOVA CORPORATION
Dept. 1, 38-15 30th Street, Long Island City 1, N. Y.

One of America's foremost names in diesel research and development

and T. L.
division presi-
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October, 1953

ANOTHER POWER TRANSMISSION PROBLEM

SOLVED for SURE with **BLOOD BROTHERS** drive line assemblies



Three Blood Brothers
Assemblies get the power
through on this Michigan
TLDT-20 Truck-Crane.

Getting real "lugging ability" in soft sand
plus fast road speeds poses many problems.

For years, the builders of Michigan Truck-Cranes and
Shovels have solved their power transmission problems
with Blood Brothers Drive Line Assemblies.

On this tandem drive machine, three Blood Brothers Assemblies
deliver maximum engine torque equally divided between the axles.

When *you're* faced with a power transmission problem,
call on our engineers. Chances are, they'll
help you "solve it for sure!"



UNIVERSAL JOINTS
AND DRIVE LINE ASSEMBLIES

BLOOD BROTHERS machine division
Rockwell Spring and Axle Company
ALLEGAN, MICHIGAN

COMMERCIAL CAR JOURNAL, October, 1953

Fast Trailer Repair At West Coast Fast Freight

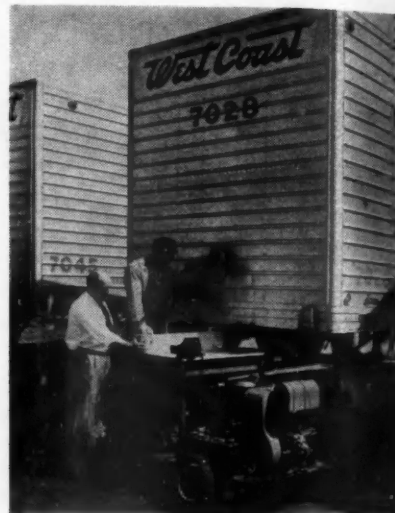
TWO mobile units speed trailer maintenance at West Coast Fast Freight, Los Angeles, Cal. First unit is "Tire Mule," a mobile tire repair unit that was developed last year. Latest is "Trailer Checker," a mobile unit

equipped to test trailer light and air connections.

Using the two units, West Coast Fast Freight makes all trailer repairs, except major ones, in regular trailer parking spaces or at freight docks, saving

considerable time and shop space.

Illustrated below, "Trailer Checker" was designed by Arthur George, fleet shop superintendent. It was built largely from spare truck equipment and other odd material, including the steering wheel which came from an old Army bomber.



Spare parts are carried right on the unit, saving mechanics time in covering the seven-acre terminal area. A 9-hp air compressor engine drives the unit as well as providing power for air compressor and generator.

Also included is a handy, small work bench equipped with tool drawer and bench vise.

Giant Salt Shaker



It used to take three men from four to six hours to unload a load of salt by hand. With this unloading rig, L. M. Anderson, Grand Saline, Texas, can unload a full 33,000 lb load in 35 to 45 min. Costs are about \$2 to \$3 a ton less than shoveling bulk salt and about \$5.60 a ton less than sacked salt. Unloading time reduction means two trucks can handle what used to take three trucks. The 16-ft hydraulically-operated conveyor can unload into a window up to 12 ft off the ground.

*"Truck stood still an hour and a half!
Wonder why?"*



"LOST" TIME —if you can SEE it you can SAVE it

You'll never be able to correct truck delays or lost time that you don't know anything about!

But with a little **SERVIS RECORDER** installed up in the cab, you know each day of *all* delays and idle time—exactly as if you were riding on the truck yourself. Even better, the **SERVIS RECORDER** gives it to you *on paper*—a graphic work-chart of what the truck did all day—a performance record that you can file away for monthly comparison.

Sounds like magic, doesn't it?—but it's just a simple, common sense little instrument that you can quickly attach to the truck cab with merely 3 screws. It's that easy!

But checking idle time isn't all; our 16-page illustrated Booklet describes *nine* other ways the Recorder helps for better truck performance. It's **FREE**. THE SERVICE RECORDER CO., 1375 Euclid Ave., Cleveland 15, Ohio.

Shows

- BUSY TIME
- IDLE TIME
- OVERTIME
- ETC.



The Servis Recorder

TELLS EVERY MOVE YOUR TRUCK MAKES

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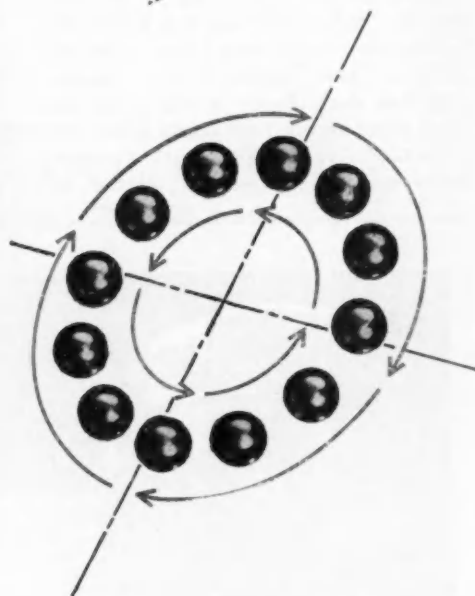
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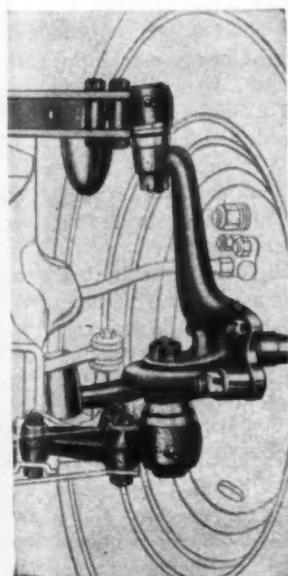


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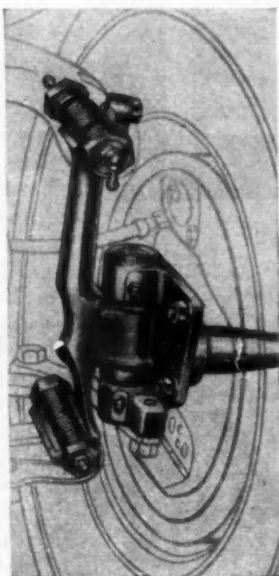
October, 1953



Thompson Front Suspension Ball Jointsmean ball-bearing Steering Ease



Thompson Front Suspension
Ball Joint



Standard King Pin
Type Suspension

This Thompson "Engineered Steering" development is a good example of Thompson cooperation with the automotive industry. We are at your service too. Write, phone or wire Thompson Products, Inc., Detroit Division, 7881 Conant Ave., Detroit 11, Michigan.

PLUS clear-cut solutions to *Six Other Major Problems* in manufacture and service.

- Creating new space for wider modern engine design
- Cutting the manufacturer's assemble-line cost
- Eliminating front suspension and steering bind
- Cutting front end overhaul time by *hours*
- Reducing lubrication points from 12 to 4
- Increasing service life *many times over*

**You can count on
Thompson
Products**

MICHIGAN PLANT
DETROIT • FRUITPORT • PORTLAND

October Roundup

Continued from Page 62

Trucking Industry

Both American Trucking Assns.' research department and the Interstate Commerce Commission have released data on Class I motor carriers indicating that the industry is continuing to haul more and more freight.

Says ATA, intercity truck tonnage transported in the second quarter of

1953 Domestic Truck Factory Sales by G.V.W.*

	5,000 lb. and less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-28,000	Over 28,000	Total
January.....	47,234	19,101	3,669	12,622	3,344	8,271	3,638	97,879
February.....	40,616	16,600	3,067	11,068	3,409	7,621	3,811	86,212
March.....	55,910	22,796	5,588	19,354	4,776	8,067	4,650	122,043
April.....	51,743	23,352	5,078	17,700	4,267	8,200	4,427	114,767
May.....	39,635	14,428	2,729	10,788	3,982	7,481	3,390	82,433
June.....	31,516	10,148	1,575	7,700	3,567	7,687	3,870	66,063
July.....	45,857	16,564	3,437	12,956	3,442	7,051	3,481	92,788
Seven Months, 1953.....	312,511	122,991	25,163	92,198	20,807	55,378	27,167	682,205
Seven Months, 1952.....	225,050	116,014	30,428	104,887	23,059	57,066	27,046	583,590

* Automobile Manufacturers Association.

1953 was 13.5 per cent greater than that carried in the same period of last year. Based on reports of 1409 Class I inter-city carriers to the Inter-

state Commerce Commission, this report shows the third consecutive quarterly period in which a gain has been registered over the preceding year and contrasts with a 3.4 per cent decrease for the same period of 1952.

Using 1941 as a base of 100, the second quarter index rose to 261, a new high for the period. The previous record was 237 established in 1951.

Increases were general throughout the country. Only the Pacific Region failed to register a gain during this quarter, dropping 2.7 per cent. On a regional basis, the Central Region was the leader with a gain of 21.2 per cent. The Rocky Mountain Region was close behind with an increase of 21.0 per cent. Other percentage gains by regions over the same period in 1952 were: Mid-Atlantic, 15.3; Southern, 13.9; Northwestern, 13.8; New England, 11.7; Southwestern, 7.8; Midwestern, 2.4.

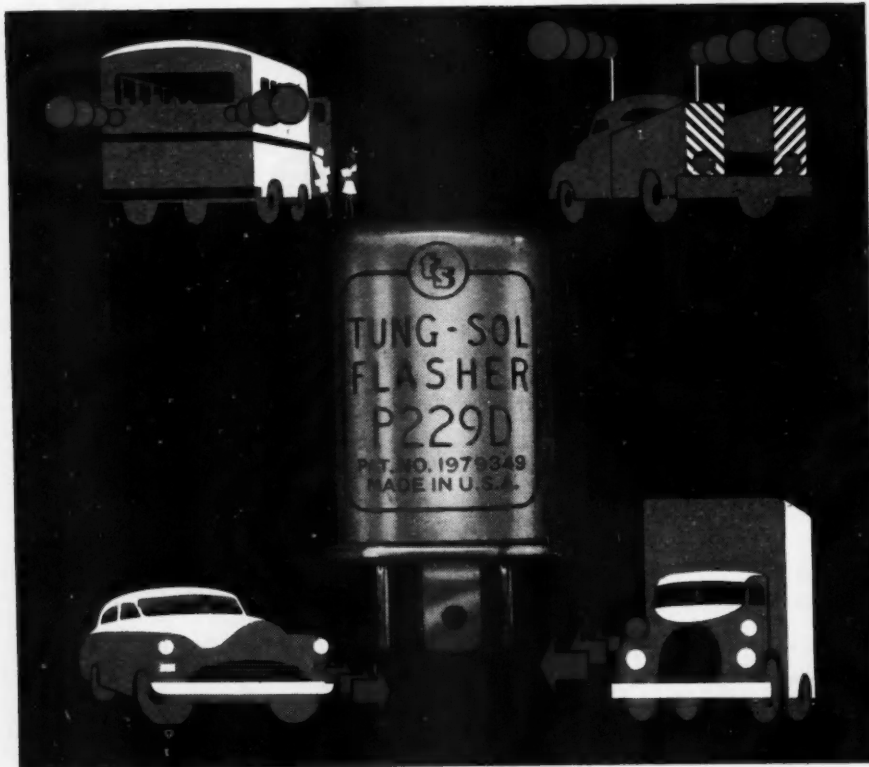
On a commodity basis, five specialized carriers gained over the second quarter of 1952. Haulers of motor vehicles showed the greatest increase with a gain of 31.4 per cent, followed by carriers of heavy machinery with 14.2 per cent. General freight carriers showed a significant rise of 14.1 per cent, while haulers of liquid petroleum products gained 11.9 per cent. Also showing an increase were the carriers of household goods whose increase was 5 per cent.

Although the inter-city truck tonnage was increased in this period, there were several commodity carriers with a decline from last year's figures for this quarter. A drop of 13.6 per cent was reported by carriers of refrigerated liquids and the refrigerated solids hauls were down 3.7 per cent. Building materials handled by motor carriers dropped 3.6 per cent, and a nominal decrease of 0.5 per cent was reported by agricultural commodity carriers. All other specialized carriers combined had an increase in tonnage of 17.4 per cent over the second quarter of 1952.

Costs, Revenues Up

Bureau of Transport Economics and Statistics of the Interstate Commerce Commission said that operating revenues of Class I inter-city motor car-

(TURN TO PAGE 198, PLEASE)



TUNG-SOL FLASHERS—

The Ideal Standard for Safe Automotive Signals

Make Driving Safer!

Tung-Sol makes All-Glass Sealed Beam Lamps, Miniature Lamps, Signal Flashers, Picture Tubes, Radio, TV and Special Purpose Electron Tubes and Semiconductor Products.

TUNG-SOL ELECTRIC INC.

Newark 4, N. J.

Sales Offices: Atlanta, Chicago, Columbus, Culver City (Los Angeles), Dallas, Denver, Detroit, Newark, Philadelphia, Seattle.

TUNG-SOL
SIGNAL FLASHERS

Over	Total
26,000	
3,638	97,879
3,811	86,212
4,550	122,043
4,427	114,767
3,390	82,433
3,870	86,063
3,481	92,700
27,167	662,295
27,046	583,580

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October, 1953

Now—Du Pont brings you a new stronger rayon yarn for tire cord—Super Cordura*—especially developed to meet the need of the motor transport industry for premium tire performance at moderate initial cost.

Look at the performance characteristics of this yarn—and you'll see why it offers you advantages never before possible in rayon tires:

20% greater strength, helping tires resist rough-road damage and curb shock. The greater strength of Du Pont "Super Cordura" gives a tougher, longer-lasting tire carcass that effectively resists bruise damage.

Greater flex resistance. This new tire yarn is engineered to give you greater protection against flex-fatigue failure. It reduces blowouts . . . offers greater recap possibilities.

*Trade-Mark

Greater moisture resistance. The higher wet strength of Du Pont "Super Cordura" yarn means greater resistance to the damaging effects of moisture—fewer tire failures.

New tire economies. There's more mileage in tires made with Du Pont's new "Super Cordura"! The higher performance characteristics of this yarn pay off mile after mile. And best of all . . . you get premium tire performance at a very moderate initial investment. Tires made with "Super Cordura" provide the practical answer to the demands of fleet operators for better rayon tires at moderate cost.

Tires made with "Super Cordura" will soon be generally available. Write for list of companies making tires with "Super Cordura". E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Dept., Wilmington 98, Delaware.

DU PONT "Super Cordura"

HIGH TENACITY RAYON



REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

October Roundup

Continued from Page 194

riers of property for the three months ending March 31, 1953, totaled \$842,476,654, an increase of 18.3 per cent over the first quarter of last year.

Expenses of these carriers incident to operation totaled \$789,332,933 during the same period, an increase of 16.4 per cent over the first quarter in 1952.

Net income after income taxes in the first 1953 quarter was \$27,973,937, against \$16,714,037 in the 1952 period, indicating an increase of 67.4 per cent.

Net income before income taxes in the 1953 period was \$50,167,781, up 57 per cent.

The ratio of operating expenses to revenues in the first quarter this year was 93.7 per cent, compared with 95.2 per cent for the same period in 1952.

Truck and tractor miles operated during the 1953 quarter totaled 1,639,382,049, compared with 1,453,925,310 a year ago, an increase of 12.8 per cent.

Tons of revenue freight transported by motor carrier in the first quarter of 1953 aggregated 65,856,151, against 59,620,205 in the 1952 first quarter, an increase of 10.5 per cent.

New Laws

Recent laws affecting truck and bus operation enacted by the various states include:

Iowa: H 10—increasing gasoline tax 1¢ per gal; increasing using fuel tax to 6¢.

New Jersey: H 476—providing buses designed for carrying more than six persons stop before crossing railroad tracks; regulating railroad crossing by large construction vehicles. H 323—providing that by ordinance municipalities may set up a system of truck routes.

Ohio: H 24—re-enacting mudguard requirements; increasing penalty to \$50. H 24—making permanent temporary increases in truck, trailer and semi-trailer registration fees which were to expire this year.

Pennsylvania: H 1109—providing for restoration of credits formerly given to bus and truck companies for license fees and taxes in payment of gross receipts tax on public utilities. H 1126—changing bus and truck inspection periods to (1) June 1 to August 31 and (2) December 1 to February 28. S33—providing overload penalties. H 110—setting up a fee schedule ranging from \$50 to \$275 for 8-wheel (4-axle in pairs) trucks.

Wisconsin: HJR . 93—providing for possible amendments during legislative recess to S 59 passed in this session providing a flat weight tax on motor vehicles.

Road Council Meets

It is a problem of educating the public to the fact that adequate roads don't cost—they pay, concluded the Adequate Roads Information Council (an adjunct of PAR—Project: Adequate Roads) at its recent meeting.

Among many other interesting suggestions was one made by General Frank D. Merrill, Commissioner of the New Hampshire Highway Department. General Merrill suggested that we merchandise our present good roads just as we sell any other product—which is by telling how good it is, rather than how bad.

Another concrete suggestion for the PAR Committee was to enlist the active support of the automotive industries dealers' organizations to head local PAR groups in their respective communities. Dwight B. Eldred, United States Rubber Co., suggested that by this means alone several hundred thousand local "grass roots" groups can be started. To carry out such a program he suggested the appointment of a small working or steering committee at (TURN TO PAGE 200, PLEASE)

YANKEE'S NEW "Thin A" Line

...the Approved Class A Type I turn signal line with the exclusive swivel base. Permits horizontal aiming of lamp head, even when mounted beyond the high point of a curved surface.

The Thin A* Line, with its newly developed lucite lens, exceeds all specifications as set down by SAE, Federal and State authorities. Lamps are finished in distinctive gun-metal gray finish.

Yankee No. 983 Recessed Mounting Thin A* Lamp

Yankee No. 981 Fender Mounting Thin A* Lamp

Yankee No. 988 Double Faced Thin A* Fender Lamp

"WITH THE EXCLUSIVE SWIVEL BASE"

FEATURES

- Single-screw lens and bulb replacement • Bonded for extra corrosion protection • Uniform appearance of all lamps • Designed for quick and inexpensive maintenance • Will fit ALL vehicular mounting requirements

THIN A* SETS TO YOUR CHOICE

Packaged individually and in stock sets. Available with the Yankee Positive Self-Cancelling Switch or the manually operated Finger Tip Control Switch. Unconditionally guaranteed.

You're safe when you see with

YANKEE

Write for catalog today

YANKEE METAL PRODUCTS CORP., Norwalk, Conn.

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t transported
first quarter
5,151. against
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truck and bus
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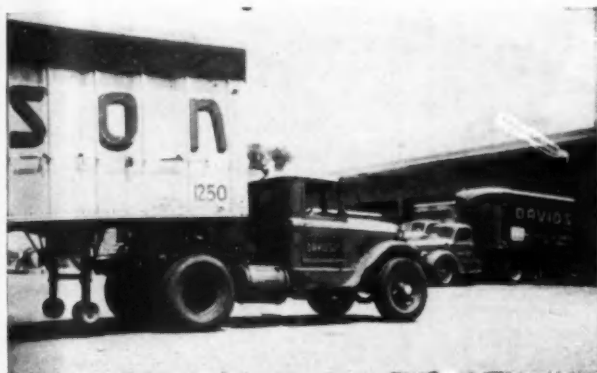
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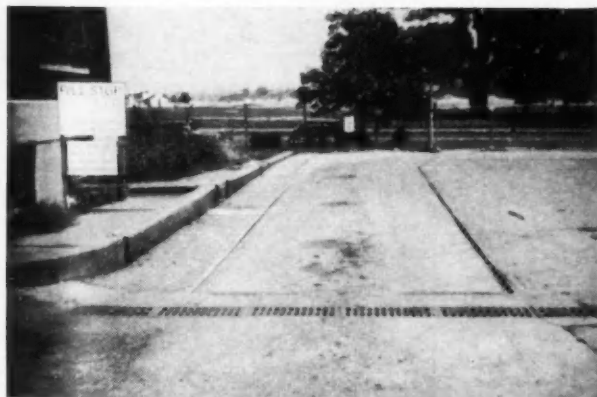
October, 1953



56-year-old trucking company — one of the largest in the country.



Unusually heavy yard movement of trailers due to frequent checking of weight during loading.



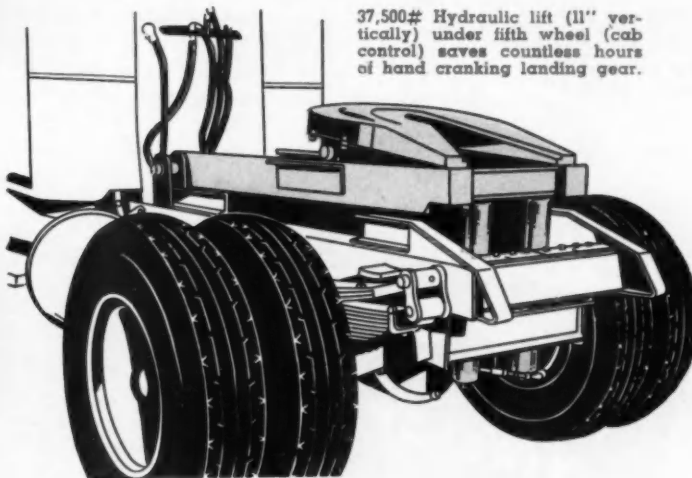
50-ft. scale kept in A-1 condition for 'round the clock use, under supervision of certified weighmaster.



Each axle carefully weighed before trailer goes on the highway.

Where "Time is Money"

CEMCO TRAILER JOCKEYS are indispensable



37,500# Hydraulic lift (11" vertically) under fifth wheel (cab control) saves countless hours of hand cranking landing gear.

Rigid enforcement against overloaded trucks prompts frequent checking of truck weight during loading process at Davidson Transfer & Storage, Baltimore.

Operating a fleet of over 500 units—serving six states in the busy Atlantic seaboard—Mr. David Davidson, Manager of Operations, after 2½ years' use, reports "the Cemco Trailer Jockey is indispensable because we operate against time".

CEMCO

A Name that has meaning in the trucking industry.
CEMCO INDUSTRIES, INCORPORATED • GALION, OHIO



Weigh beam equipped with "weightograph" to tell the story quickly.

October Roundup

Continued from Page 198

the national level to give guidance to the local groups.

Among the interesting proposals advanced was a plan to enlist the support of the railroads in our highway program by building expressways as elevated highways over existing railroad rights-of-way and pay the rails for the privilege. George J. Crimmins, Ford Motor Co., who proposed the

plan, suggested it would be cheaper than present condemnation proceedings, destruction of property, excavation and relocation of sewers and public utilities.

Slow Down Success

Success of the nation's large-scale war on speeders in 11 states from Maine to Maryland was reported at the recent meeting of the Northeastern State Safety Coordinators to appraise results of their summer highway "slow-down" program. The northeastern region witnessed an "encouraging" 3 per

cent drop in deaths from the 1952 summer toll. Forty-one fewer persons were killed in the 11-state area's highway accidents during June, July and August than in the same months of 1952, despite a 6 per cent increase in travel volume which set an all-time summer record.

The three-month fatality record of the 11 states for 1952 and 1953 follows:

State	Summer, 1952	Summer, 1953
Connecticut	59	58
Delaware	26	27
Maine	36	42
Maryland	146	120
Massachusetts	124	125
New Hampshire	18	30
New Jersey	216	203
New York	515	546
Pennsylvania	407	355
Rhode Island	12	20
Vermont	24	16
Totals	1,583	1,542

1953 Truck Trailer Shipments*

	July	Seven Months
Vans		
Insulated and Refrigerated		
Steel	94	554
Aluminum	255	1,909
Furniture		
Steel	100	890
Aluminum	11	
All other closed-top vans		
Steel	935	6,805
Aluminum	837	6,839
Open-top		
Steel	174	1,077
Aluminum	206	1,340
Total—Vans	2,612	19,474
Tanks		
Petroleum	326	2,322
Food	24	212
L. P. G.	12	77
All other	29	221
Total—Tanks	391	2,832
Pole, Pipe and Logging		
Single Axle	49	355
Tandem Axle	102	723
Total	151	1,078
Platforms		
Racks, livestock and stake	152	3,672
Grain bodies	49	632
Flats, all types	725	5,381
Total—Platform	926	10,185
Low-bed haulers	423	2,648
Dump trailers	63	642
All other trailers	5,353	15,384
Total—Complete Trailers	9,919	52,243
Converter dollies	26	979
Chassis only	320	2,156
Total—Trailers and Chassis	10,265	55,399

* Industry Division, Bureau of the Census.

Equipment Committee

Engineering representatives of the Motor Truck Committee of the Automobile Manufacturers Assn. and the Truck-Trailer Mfrs. Assn. met jointly for the first time as a working committee of the newly-formed Joint TTMA-AMA Engineering Committee, which was created last month to discuss automotive engineering problems common

(TURN TO PAGE 202, PLEASE)

COMMERCIAL CAR JOURNAL, October, 1953

Tire chains cost so little and protect so much

Tire chains cost so little, compared to the cost of a truck and its load, it's just common sense to equip every vehicle with the best chains you can buy. Don't gamble, see that each unit in your fleet has its set of WESCO TIRE CHAINS, and check their condition periodically, as you do your tires.

WESCO TIRE CHAINS have easy-on, easy-off buckles—can be readily put on in time, can be easily taken off when pavements clear. They give long service—are tough to withstand stretch and pull; are hard for long wear but are not brittle. They will keep your trucks running on schedule.

Write for Catalog Sheets and name of your local WESCO Distributor

WESTERN CHAIN COMPANY
1801 BELMONT AVENUE • CHICAGO 13, ILLINOIS

the 1952
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area's high-
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increase in
an all-time

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953 follows:

Summer,

1953

58

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120

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16

1,542

Shipments*

July Seven Months

94 554

255 1,969

100 } 890

11 }

935 6,905

837 6,839

174 1,677

206 1,340

612 19,474

326 2,322

24 212

12 77

29 221

391 2,832

49 355

102 723

151 1,079

152 3,672

49 632

725 5,081

926 10,185

423 2,649

63 642

5,353 15,384

9,919 92,243

26 979

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Census.

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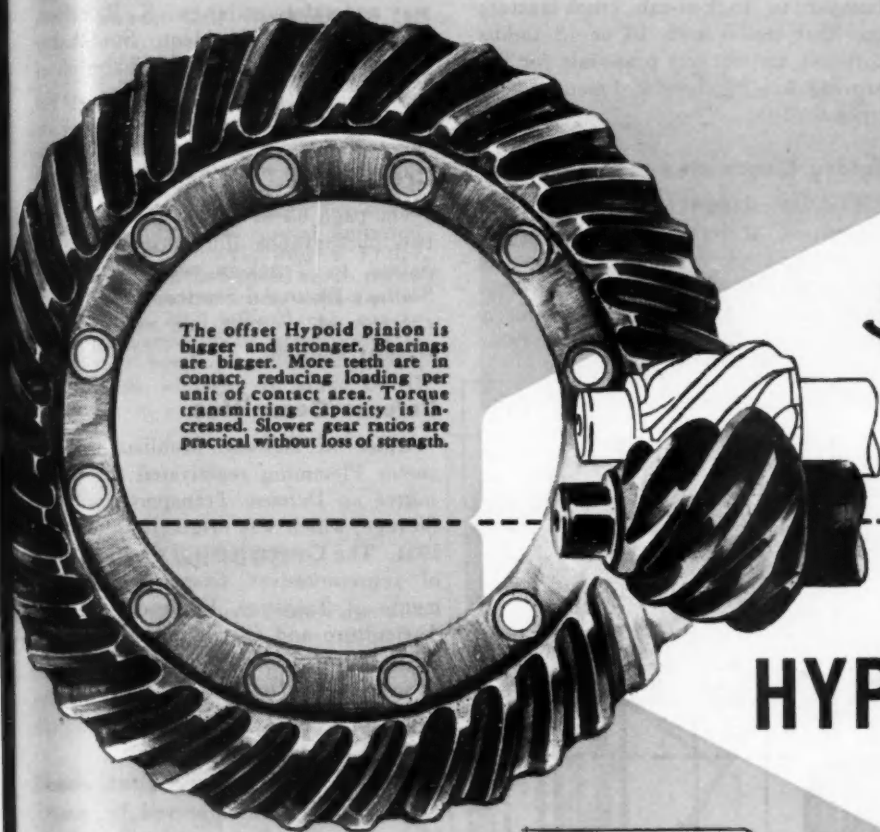
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October, 1953



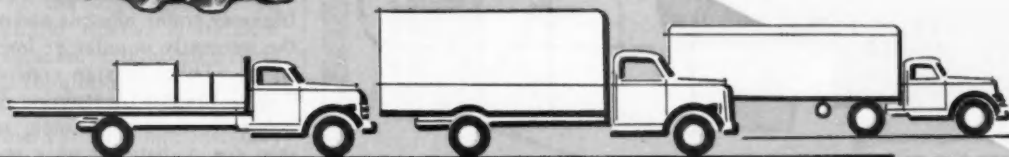
The offset Hypoid pinion is bigger and stronger. Bearings are bigger. More teeth are in contact, reducing loading per unit of contact area. Torque transmitting capacity is increased. Slower gear ratios are practical without loss of strength.

Specify

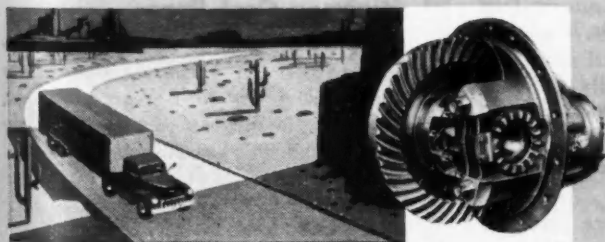


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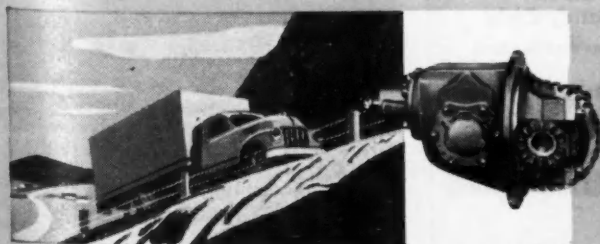
HYPOID GEARING



**FOR FAST, TROUBLE-FREE HAULING
AT LOWEST TON-MILE COSTS!**



SINGLE-SPEED SINGLE-REDUCTION FINAL DRIVES are especially designed for long life and economical operation. Equipped with Hypoid gearing they provide needed strength with a minimum of parts for low-cost upkeep.



SINGLE-SPEED DOUBLE-REDUCTION FINAL DRIVES provide improved performance on tough jobs. Hypoid gearing is used for the first reduction and helical spur gearing for the second. Ground clearance and stability are increased.

The measure of any good truck is how it performs on the job! And nothing contributes *more* to dependable, low-cost operation than TDA Axles.

The biggest reason, of course, is Hypoid gearing—*proved* by billions of ton-miles of actual operation. This modern axle gearing offers slower gear ratios for use with today's higher-speed, higher-powered engines. It has the needed strength and rigidity to stand up under mile after mile of hard service. What's more, TDA Hypoid gearing is available in a complete range of axle capacities—including single-speed axles, two-speed axles and tandem-drive axle units. Whichever you choose—you benefit from the lower-cost operation, better performance and proved dependability of Hypoid gearing.

The next time you buy trucks make sure they're equipped with Hypoid-geared TDA Axles and Brakes. You'll find them on the finest trucks built today.



AXLES

TIMKEN-DETROIT AXLE DIVISION

ROCKWELL SPRING AND AXLE COMPANY, DETROIT 32, MICHIGAN

WORLD'S LARGEST MANUFACTURER OF AXLES FOR TRUCKS, BUSES AND TRAILERS

PLANTS AT: Detroit and Jackson, Mich. • Oshkosh, Wis. • Utica, N. Y.

Ashtabula, Kenton and Newark, Ohio • New Castle, Pa.

October Roundup

Continued from Page 200

to both the motor truck and trailer industries.

The subcommittee meeting was called to review and evaluate equipment suggestions pertaining to truck-trailer dimensions made earlier by the Equipment Development Committee of the American Trucking Assns.' Regular Common Carrier Conference. They

dealt with the proposed 102 vs 96-in. bumper to back-of-cab truck-tractor; the 35-ft trailer with 10 or 18 radius corners; and various proposals for improving loading height dimensions in truck-trailers.

Safety Committee

The Inter-Industry Highway Safety Committee, at its annual meeting in Detroit, re-elected W. F. Hufstader as chairman. Mr. Hufstader, vice president, General Motors Corp., has been a member of the committee since 1948,

and has long been identified with highway and safety activities. K. B. Elliott, executive vice president, Studebaker Corp., was re-elected vice chairman of the committee. Mr. Elliott has served on the committee since 1947.

Credit Line

On page 83 of the August issue the two photographs illustrating Buffalo's Salute to Truckers were taken by Smitty's Photo Ad Service, Buffalo. The courtesy of a credit line was unintentionally omitted.

Defense Committee

Office of Defense Mobilization Director Flemming reactivated the Committee on Defense Transportation and Storage, which was originally set up in 1951. The Committee will be composed of representatives from the Departments of Treasury, Defense, Interior, Agriculture and Commerce, also DTA, Foreign Operations Administration and Federal Civil Defense Administration.

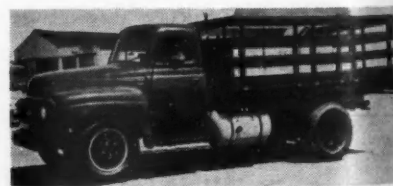
Red Stop Signs

A red highway stop sign which glows at night has been approved by many highway traffic officials and will replace the currently popular yellow and black signs. This red sign consists of a reflective sheeting containing 30,000 glass beads to the square inch, and can be seen for a distance of a quarter of a mile when hit by the beams of an automobile's headlights. The signs are used in 28 states and are to be installed in New York and Chicago.

Highway Cost Drops

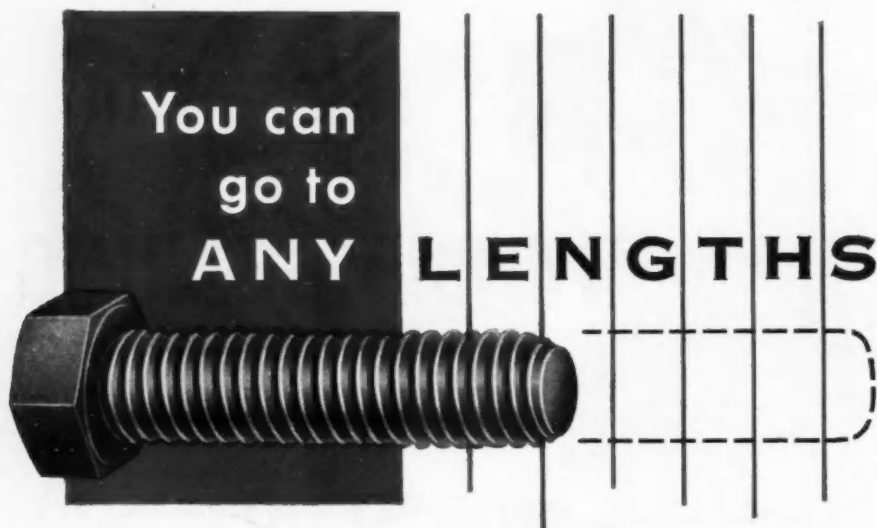
Cost of building highways are declining after a steady increase since 1949, according to Bureau of Public Roads. The Bureau reports that highway construction costs have dropped 10% since 1949. (TURN TO PAGE 207, PLEASE)

Medium Duty LP Gas



International Harvester Co., Chicago, is putting into production five medium-duty truck models in the R-160 class with factory installed LP gas fuel systems. GVW ranges from 14,000 to 17,000 lb. Models are RP-160, RP-161, RP-162, RP-164 for heavy hauling and RP-165 for over-the-road tractor service. Engine is 108 hp, Silver Diamond 240. All are Underwriters Laboratories listed. Shown above is the RP-160.

COMMERCIAL CAR JOURNAL, October, 1953



with Lamson

FULL THREAD BODY cap screws!

There's no need to waste time trying to find the right length of cap screw for body applications. Lamson Full Thread Body Cap Screws are threaded to the head and you can cut them off to the length desired.

These rugged Cap Screws are made especially to withstand the stresses and strains of the road as well as high torque pressures during tightening.

Available in diameters from 1/4" to 1/2" and lengths from 1/2" to 2".

Lamson Full Thread Body Cap Screws, are another fine product in Lamson's complete line of automotive fasteners. Order them from your distributor.



The **LAMSON & SESSIONS Co.**

1971 West 85th Street • Cleveland, Ohio

Plants at Cleveland and Kent, Ohio • Chicago • Birmingham



ONE OF THE WORLD'S LARGEST MANUFACTURERS OF AUTOMOTIVE FASTENERS

with high-
B. Elliott,
Studebaker
chairman of
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October, 1953

Seven Car Carrier

This diesel-powered, sleeper-equipped, seven-car capacity car carrier sees service in ten western states. It was built by the operator, Convo Co., in its Portland, Ore., shops. Engine is a horizontal, Cummins diesel, Model No. NHHB 600, cooled by two Ford radiators. It has a Timken two-speed Model No. R330 differential mounted with a "pusher" axle and a Fuller Model No. 5C72 five-speed main transmission. Tires on truck and trailer are 9:00 by 20. A Ford cab cut in two and widened 26 in. accommodates the sleeper berth. Loaded as above, combination is 12½ ft high, 60 ft long.



October Roundup

Continued from Page 202

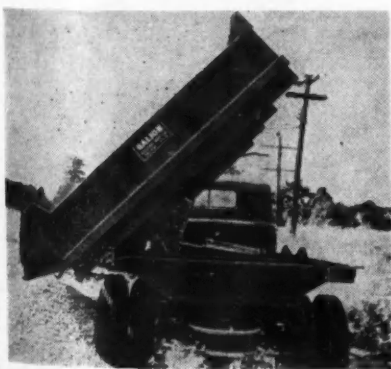
way construction costs during the second quarter of this year showed a substantial decline from the first quarter.

Road Study Done

A survey of the operations of the Bureau of Public Roads, undertaken by the management engineering firm Booz, Allen & Hamilton, has been completed and the recommendations have been submitted to the Undersecretary of Commerce for Transportation. It is said the report will not be made public and that the recommendations embraced chiefly ideas regarding office procedure and are relatively minor.

(TURN TO PAGE 208, PLEASE)

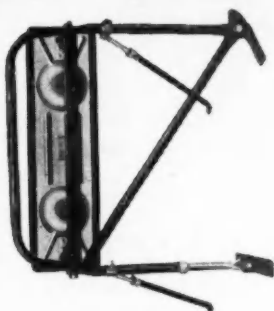
Side Dump Body



This side dump body, announced by Galion Allsteel Body Co., Galion, Ohio, uses a double lift arm action on a standard dump truck application. Hoist capacities can be selected to meet load requirements. Bodies are 8 to 10 ft long with 3 to 6 cu yd capacity. It can be constructed to dump either right or left. Dump angle is 45 deg.

COMMERCIAL CAR JOURNAL, October, 1953

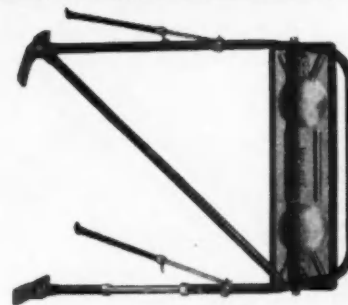
YOU'VE NEVER SEEN IT SO GOOD . . .



MODEL 9900
FOR CAB-OVER-ENGINE TRUCKS



9000M
MIRROR HEAD



MODEL 9800
FOR STANDARD TRUCKS

AS WITH THE MIRO-FLEX NEW HEAVY-DUTY TRUCK MIRRORS

Here's a new number in the famous Miro-Flex line of truck mirrors that has received enthusiastic acceptance from operators and fleet owners wherever it has been shown. This mirror has been engineered and designed for the "big boys" who demand an extra-heavy, extra-braced mirror that will stay put in any position. With the Miro-Flex 9800 series for standard trucks, and the 9900 series for cab-over-engine trucks, you can see better and quicker and know what's coming. Both use the dependable triple-plated 18" mirror head, which has enjoyed immense popularity throughout the country. The "U" arms permit adjustment to any position, and the mounting brackets enable easy installation on all makes of trucks.

Adapting Brackets for the 9800 and 9900 Series of Mirror Assemblies

Top Bracket for all GMC, Chevrolet, Dodge, Diamond-T, International, Ford and White 3000 series trucks.

No. 8

Top Bracket for Mack, White WC Models 28, 26, 22, 20, 16, and White Freightliner WF42 trucks.

No. 9

Is standard as Lower Bracket on all assemblies, and is used as the Top Bracket on Federal Kenworth, White Sterling, or any other cab with a square door.

No. 10



Write for Catalog and Complete
Line of Miro-Flex Mirrors and Miro-Flares

MIRO-FLEX COMPANY, INCORPORATED

1824 EAST SECOND STREET—WICHITA 7, KANSAS

October Roundup

Continued from Page 207

IHC Radio Program

International truck dealers, using the network facilities of the National Broadcasting Co., have launched a daily 15-minute radio show featuring Alex Dreier, nationally recognized authority in radio and television news reporting.

Titled "Man On The Go," the pro-

gram, introduced last month, under sponsorship of the Motor Truck Division, International Harvester Co., features special reports, human interest stories and spot news accounts and is being aired by more than 125 NBC stations. In addition, International sponsors Drier on a once-weekly 15-minute television program.

Tax Campaign

A grass-roots campaign to create greater public awareness of the high and discriminatory taxes levied against essential automobiles and trucks is

being planned by National Automobile Dealers Assn. as a nationwide activity.

City Ton-Mile Tax

Wall Street Journal has reported that officials in Denver, Col., are gathering information on the operation of the ton-mile tax with the view to levying such a tax in that city. It is thought that a ton-mile tax might make it unnecessary to increase property taxes.

Farm Specialist

Appointment of Dr. Walter J. Willis as American Trucking Assn.'s specialist in agricultural relations was announced today by General Manager Ray G. Atherton. In announcing the new ATA position, Atherton pointed out that "agriculture and trucking are the country's two largest industries, in that order, as measured by their total employment, and this step signifies increased attention to common problems and opportunities to which the trucking industry has been giving its earnest attention for a considerable period."

Tax Allowance Cut

Defense Mobilizer Arthur Flemming has announced that the government will shortly cut back its policy of quick tax write-off allowances for a large percentage of the industries now receiving them. He explained that a large percentage of the defense expansion goals have been filled or are now deemed adequate to fill defense needs (TURN TO PAGE 210, PLEASE)

The Fastest Living Thing on Earth!



818 MILES PER HOUR

The unbelievable speed of 400 yards per second by the Deer Botfly.

BARTLETT HYDRAULIC 5th WHEEL

The Fastest Dock Spotter!
and with less effort, too!



This BARTLETT Speedy Helper Will: Spot in 5 Minutes instead of 20 . . . Cab Controlled—it saves driver's time climbing in and out of cab to wind up legs . . . Save valuable inches by closer dock parking . . . Guaranteed to cut spotting manpower —Pays for itself in ninety days . . . Sturdily Built to Minimize Maintenance . . . Lifts up to 50,000 lbs. 14 inches High.



Adapter Pin for Full Automatics available—Swings out of the Way.

AMONG THE MANY USERS:

Burlington Truck Lines
Consolidated Freightways
Darling & Company
East Texas Motor Freight
Fleet Maintenance
Fruit Belt Motor Service
Gardons Transport
Hines Lumber Company
Huber & Huber
Interstate Motor Lines

The Kroger Company
Lasham Cartage
Liberty Trucking Co.
Mid-States Freight Lines
National Tea Co.
Norwalk Truck Line
Pacific Intermountain Express
Peoria Cartage Co.
Scherer Freight Lines
The Willott Company

These Units Shipped Anywhere for Local Installation on any make Tractor.

BARTLETT TRAILER CORPORATION

3080 ARCHER AVE. • CORNER OF ASHLAND • CHICAGO 8 • VIRGINIA 7-1160

Brake Drum Gage



Standard Wheel and Rim Co. President Ralph Hunsicker has developed this brake drum gage designed to give a quick check on whether or not a drum has enough metal left to be machined safely. National Wheel and Rim Assn. has officially adopted it and quantity production is planned. It is a sliding type gage that will fit into the deepest groove of a brake drum with the slide marked with various drum diameters. In use, the slide is extended to the sides of the drum and, if the mark on the gage for that size drum shows, the drum is worn more than manufacturer's tolerance and should not be machined.

FLEET OWNERS, MAINTENANCE MEN—

Here's a ring set specifically designed to eliminate sludge clogged oil rings and springs!

AMERICAN HAMMERED

Pre-seated* Krome-Oil

PISTON RING SETS

* This smooth, even bearing of narrow land contact is the result of factory-applied pre-seating process which is equivalent to 300 to 500 miles of actual engine operation. Assures instant oil control.

The free-flowing spring in the American Hammered Krome-Oil Ring Set has more oil slots than any other on the market. This unique design eliminates clogging. Efficient oil drainage is also provided by funnel-shaped channel in spacer.

Top groove compression ring is also bevel-backed or taper-faced to afford triple protection against blow-by and further aid quick seating. This triple blow-by protection at the points indicated, greatly increases power, an important feature for fleet men.



Smart new blue and yellow American Hammered Krome-Oil carton is the quality mark in the automotive piston ring replacement field. Krome-Oil licks fleet maintenance problems.

For the best in fleet maintenance
Remember American Hammered
POWER-PLUS SERVICE
Koetherizing • 61-60 Groove Insert
Dry Film Lubricant

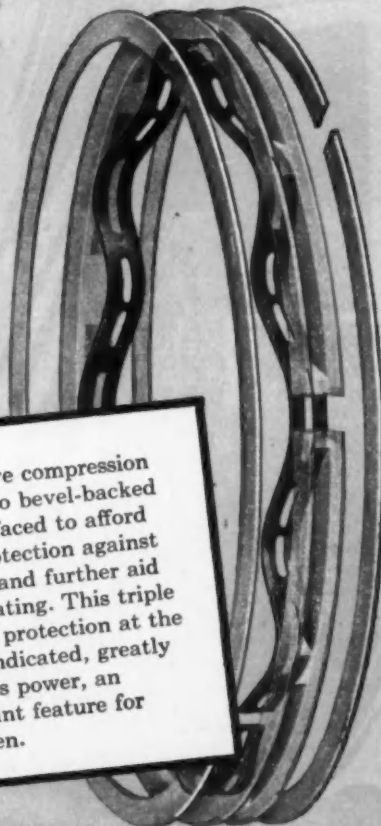


American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street, Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement Piston Rings



October Roundup

Continued from Page 208

Safety Guides

ICC Commissioner Arpaia denies that the ICC's highway safety work duplicates that of the states. He says motor carriers should observe the following five points: (1) management

should lay stress on preventive maintenance by keeping vehicles in perfect condition; (2) management should limit operation to carefully selected and trained drivers; (3) especial attention should be paid to weeding out the accident-prone; (4) every terminal should have a "spare" board—extra drivers on call to substitute for any temporarily mentally disturbed by debt, family troubles and the like; and (5) unions should agree to "ground" a man temporarily who is involved in some emotional disturbance likely to make his driving unsafe.

Truck Lighting

Vehicle lighting may become more nearly standardized and more effective if recommendations of a Vehicle Lighting Subcommittee of the National Committee on Uniform Traffic Laws and Ordinances are adopted. Meeting in Washington, the Committee voted to recommend five different types of lighting to show the degree of hazard and to indicate what the driver of the approaching vehicle should do. These proposed signals range from (1) two alternate flashing lights which are to be used on emergency vehicle for which all other traffic is to stop; (2) simultaneous flashing lights meaning slow down and proceed with caution; (3) directional signals indicating a right or left turn; (4) a "braking light," a new name for the conventional "stop light"; and (5) marker lights, including head and tail lights.

Hilts Dies

Harold E. Hilts, Deputy Commissioner of the Bureau of Public Roads, died suddenly at his home in Silver Spring, Md., on Saturday, September 5, at the age of 70.

Fleet Courses

More than 8,000 persons in the motor transport industry have completed courses sponsored by the National Committee for Motor Fleet Supervisor Training since its inauguration in 1939.

Today the courses are offered in 47 colleges and universities throughout the country. They were conceived by Professor Amos E. Neyhart of the Pennsylvania State College.

Oregon Merger

Three highway user groups in Oregon have joined to form the new Ore-
(TURN TO PAGE 212, PLEASE)

Unit Packaging



Sperry Gyroscope Co. had a problem. Fire control systems for 75 mm artillery machine guns are complex units, consist of several precision parts and weigh about 3 tons. Safe packaging in a standard trailer to protect the delicate parts took too long with danger of misplacing parts. Dravo Corp., Pittsburgh, came up with this steel box that holds all parts for one unit, fits two or three on a flatbed trailer. Result: faster packing, less damage, all parts arrive together at destination.

COMMERCIAL CAR JOURNAL, October, 1953

ARE DRIVERS "RAILROADING" YOUR VEHICLES?

Handy Governors Will Stop It

Any driver is likely to be less than meticulous in his care of a vehicle he doesn't own. Many feel no compunction about "railroading" your vehicles. Drivers do most of their work away from supervision . . . abuses are hard to correct.

Handy Governor will stop "railroading"—stop practices which run up costs and wear out vehicles before their time.

The savings in tire, fuel, and lubricant costs, engine repairs, brake maintenance and general maintenance are spectacular. Reduced accident and insurance costs are equally important.

Let us show you some figures on savings — and tell you how little it costs to get them.



KING-SEELEY CORPORATION

ANN ARBOR, MICHIGAN

PLANTS AT
ANN ARBOR, SCIO,
YPSILANTI



with **magicians and mechanics**



CONTROL IS MIGHTY IMPORTANT . . .

but you don't have to be a magician to run nuts or screws to a predetermined and uniform tightness — in $\frac{1}{4}$ the time! All you need is a CP Air Impact Wrench — the only automotive impact wrench with Controllable Power.

Other features that add to CP's time-saving operation are its short overall length, lightweight and detachable angle heads for easy handling in those seemingly inaccessible places. For more information on the available $\frac{1}{2}$ ", $\frac{3}{8}$ ", 1" and $1\frac{1}{4}$ " bolt size models, write for Bulletin 3029.

Chicago Pneumatic Tool Company, 8 East 44th Street, New York 17, N. Y.



Chicago Pneumatic

AUTOMOTIVE SERVICE EQUIPMENT • AIR IMPACT WRENCHES • TRUCK JACKS • PNEU-DRAULIC PUMPS • AIR COMPRESSORS • FENDER IRONS

COMMERCIAL CAR JOURNAL, October, 1953

October Roundup

Continued from Page 210

gon Trucking Assn. Groups joining in the merger are Oregon Motor Transport Assn., Oregon Highway Council and Oregon Drayman's and Warehouseman's Assn.

Missouri Taxes

A new fact leaflet, published by the Missouri Bus and Truck Assn., shows

trucks and buses pay 48.4¢ of the state's highway tax dollar and represent only 21 per cent of vehicles licensed in the state.

Autocar Expansion

White Motor Co., Cleveland, Ohio, has announced that construction has started on a new \$2,000,000 plant for its recently acquired Autocar Division. The new facilities will be at Exton, Pa., west of Philadelphia, and are expected to be completed by early next year. Upon completion, Autocar will move entirely to the new location. The pres-

ent plant in Ardmore, Pa., has been sold, but no plans have been announced for its use.

Deadline Extended

Contract motor carriers were granted until December 1 to file schedules of minimum rates for government transportation and to supply the ICC with copies of their actual contracts with the government.

No. 1 Truck Line

Pacific Intermountain Express Co., Oakland, Cal., will move from eighth to first place if its deal to purchase West Coast Fast Freight, Inc., is approved by the ICC. It would give PIE a fleet of more than 3000 trucks.

Trailer Pool

Members of ATA's Regular Common Carrier Conference are studying a newly-proposed trailer pool plan following the recent meeting of the Board of Governors.

Outline of the plan includes: (1) Territory—east of the Rocky Mountains, (2) Organization—top control by a board of directors of common carriers representative of members, (3) Rolling Stock—the pool to purchase all road trailers from participating members by exchanging pool stock for trailers, part cash and part stock, or all cash. The pool to assume equipment obligations outstanding; value of trailers set by a "blue book" and (4) Contract providing for all of a carrier's road trailers, the term running from three to five years.

(TURN TO PAGE 228, PLEASE)

Make your own tests on your own trucks & trailers and you, too, will be convinced:

WARREN *Snap Seal* **SAFETY LAMPS**

pay off in performance... have no equal



Rugged, unique *Snap Seal* vapor- and explosion-proof construction holds shatterproof lens and thick aluminum alloy combination reflector and body casting of WARREN Lamps firmly together—pressure-sealed *bubble-tight!*—without screws, clips, washers, springs, etc. Remove lens in one second with screwdriver—replace merely by snapping lens back into body. All WARREN Safety Lamps meet or exceed S.A.E. recommended procedure, I.C.C. and State requirements... are guaranteed for 10 years against defective workmanship and materials.

Why risk the safety of your drivers, your equipment and your loads... why put up with lamps requiring frequent maintenance or bulb replacements? Install sturdy, dependable WARREN *Snap Seal* Safety Lamps and get trouble-free lighting.

BUILT TO LAST LIFETIME OF VEHICLE! WARREN *Snap Seal* Lamps are built to provide years of superior service. Their unique pressure-tight construction insures a *complete seal against every weather and service condition*. Even after long, tough operation, typical users report "no trouble whatsoever" and "no evidence of future failure due to wear, rust, corrosion or vibration"—the causes of failure in ordinary lamps.

Manufacturers of WARREN Manifold & Emergency Valves & Custom Built Machinery Since 1901

ASSURES SAFER, LONGER-LASTING LIGHT!—Install *Snap Seals* on just one truck—or order a few for replacements. Then run your own tests—*your way*—and you'll prove the extra value of *Snap Seals* for yourself.

COST LESS FOR THE "LONG HAUL" You'll also prove it profitable to standardize on *Snap Seals* for replacements... to specify *Snap Seals* on your new equipment.

Write for complete information today!

BETTS

MACHINE COMPANY
WARREN, PENNSYLVANIA

Cow Catchers



No grille guard this. Wandering cattle in Texas and the southwest now and then become entangled with trucks. Damage can be extensive to the truck, especially the radiator or steering gear, and might kill the steer, ruining good beefsteak before it gets to market. To avoid this, National Steel Products Co., Houston, Texas, has equipped its tractors with cow catchers like that illustrated above.

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October, 1953



4 Powerful Reasons Why **CHEVROLET** ADVANCE- DESIGN **TRUCKS** work harder . . . work longer . . . work for less!

MORE POWER AT LOWER COST! You can look forward to sizeable savings on gasoline with Chevrolet trucks on the job. In heavy-duty models, the advanced Loadmaster engine with new high-compression ratio of 7.1 to 1 delivers more power than ever—and does it on less fuel! In light- and medium-duty models, Chevrolet's Thriftmaster engine combines top-notch performance, with rock-bottom operating cost.

TAILORED TO YOUR JOB! Of course you want a truck that fits the requirements of your particular job. And you get just that when you buy a Chevrolet truck! You get the *right* power . . . the *right* chassis units from tires to transmission. Chevrolet trucks are *factory-matched* to do your work at lowest cost!

RUGGED AND RELIABLE! These great 1953 Chevrolet Advance-Design trucks are built stronger to stay on your job longer! Frames, for example, are sturdier and more rigid. And you'll find extra strength in other vital places, too. The result is a truck that gives you extra miles and months of low-maintenance operation.

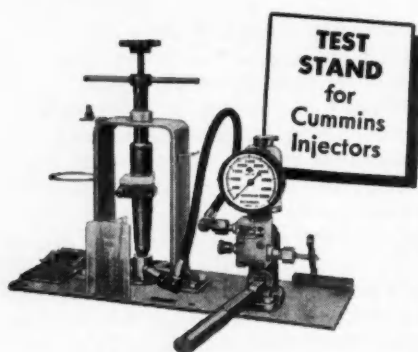
LOWEST PRICED LINE! You start saving money the moment you buy a Chevrolet truck. For, in addition to all its other advantages, Chevrolet is *America's lowest priced truck line!* Why not start saving *now!* Your Chevrolet Dealer will be happy to give you all the facts. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the Loadmaster or the Thriftmaster—to give you greater power per gallon, lower cost per load. **POWER-JET CARBURETOR**—for smooth, quick acceleration response. **DIAPHRAGM SPRING CLUTCH**—for easy-action engagement. **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **HYPOID REAR AXLE**—for dependability and long life. **TORQUE-ACTION BRAKES**—on light-duty and medium-duty models and on front of heavy-duty models. **TWIN-ACTION REAR BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—for greater holding ability on heavy-duty models. **CAB SEAT**—with double deck springs for complete riding comfort. **VENTIPANES**—for improved cab ventilation. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—for easier handling. **UNIT-DESIGNED BODIES**—for greater load protection. **ADVANCE-DESIGN STYLING**—for increased comfort and modern appearance.



Diesel SERVICE EQUIPMENT



Other Diesel Service Equipment:

- GM 71 DIESEL TOOLS
- NOZZLE CLEANING KITS
- VALVE LAPPING BLOCKS

BACHARACH INDUSTRIAL INSTRUMENT CO.
7301 Penn Avenue • Pittsburgh 8, Penna.

Send complete information on your Diesel Testers and Service Tools

Name _____

Company _____

Address _____

October Roundup

Continued from Page 212

Economies foreseen by the committee if such a trailer pool could be placed in operation are: savings by improved and regular trailer maintenance, standardization of trailers and equipment, rental of advertising space on trailers, lower finance charges, lower original costs and possible reduction of personnel.

Safety Awards

Truck fleets awarding their outstanding safe drivers recently included:

Service Trucking Co., Federalsburg, Md.—to 55 drivers. In a contest at the ceremonies, one of the drivers won a \$1000 prize.

Akers Motor Lines, Gastonia, N. C.—to 29 drivers. Eleven of the drivers were from the fleet's Columbia, Ga., terminal, and the rest from the Atlanta, Ga., terminal.

Carolina Freight Carriers Corp., Cherryville, N. C.—to 280 drivers. Their record was three months without an accident but represent 92 per cent of total drivers.

Cartensen Freight Lines, Inc., Clinton, Iowa—to 42 drivers.

Pacific Intermountain Express, Inc., Oakland, Cal.—to 36 drivers. Awards were made in ceremonies held monthly to honor each group of drivers as they complete additional years of accident-free driving.

(TURN TO PAGE 230, PLEASE)

S-M Self-Adjusting TAPPETS

Automatically and continuously keep valves in

PERFECT TIMING

10-25% Increase in POWER

15-20% MORE miles per gal.

75% REDUCTION in valve

MAINTENANCE COST

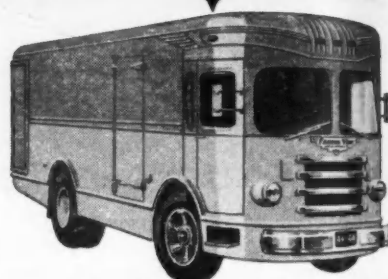
Write For FREE Folder Today

SKINNER - MOSER SALES
DUNEDIN, FLORIDA

You'll find a part for almost every repair job requirement in the Wohlerlert line. They are good, long lasting parts, too.

Wohlerlert
Corporation
LANSING 5 MICHIGAN

Ask your
**International
Harvester**
motor truck salesman
to tell you the
**FAGEOL VAN
PROFIT
FACTS!**



Would you like to make \$2500 more profit per truck per year because of increased payload capacity?

Are you interested in reducing maintenance costs by \$318.75? In cutting annual registration fees by \$137.50? Is a 15% increase in daily deliveries worth investigating?

If your answer is "Yes", ask to see the new Fageol Van Truck Survey now being offered by International dealers and branches.

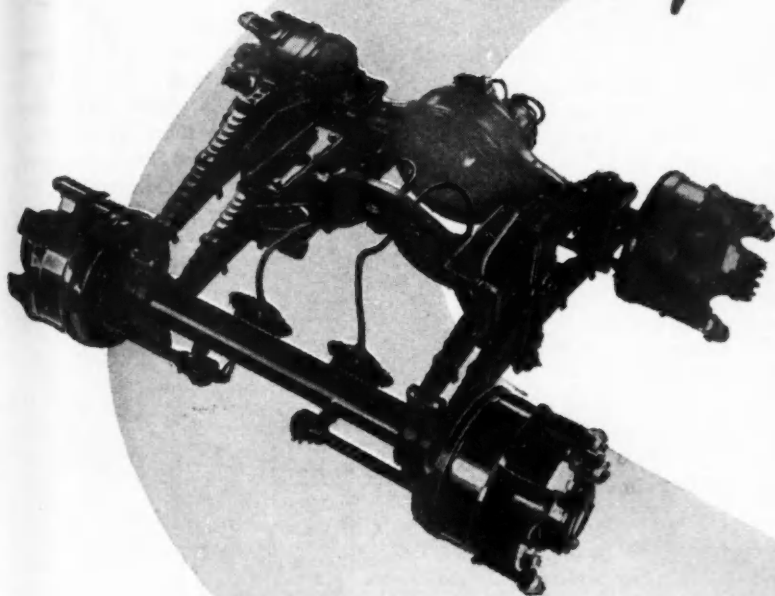
A-2093



**TWIN COACH
COMPANY**

Kent, Ohio

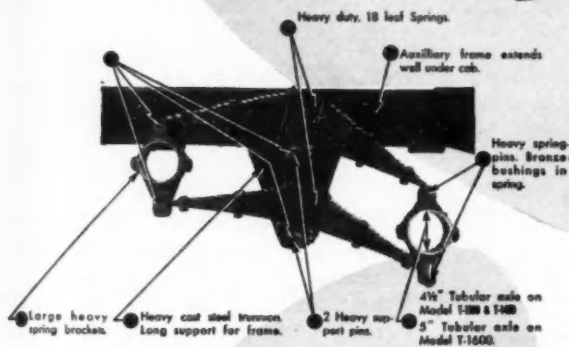
The GRICO *Super-flex*



The **SIMPLICITY OF CONSTRUCTION** and the effectiveness of operation make the Super Flex 3rd Axle TOP5 in the trucking field from the standpoint of low cost maintenance and efficiency. The GRICO Super-Flex can be transferred easily from one vehicle to another as a truck wears out or becomes obsolete.

Your trucks may be doing a good job now, but watch your profits soar once you have equipped them with Super-Flex 3rd Axles. We say this because we have hundreds of letters from truck and fleet owners telling us that the GRICO Super-Flex has meant better and more economical service through . . . more maneuverability . . . greater fuel savings . . . better weight distribution . . . added payload . . . longer tire wear . . . increased safety . . . and low maintenance.

Your GRICO Super-Flex 3rd Axles are scientifically engineered and ruggedly built to give you long years of economical, trouble-free service. Just check the advantages of the Super-Flex and you'll agree that it's the only trailing axle for your trucks. Look to Grico for the advanced in engineering and feel confident that with the Grico Super-Flex you'll be on the road to higher profits with the finest unit of its kind in the world.



Easily Changed

If the nature of your trucking changes, Super-Flex can be transformed into a Grico 2-Axle Drive at a very nominal cost and a minimum of lost time.

GRICO *Dual Axle* UNIT

Convert your present single-axle trailer to a dual-axle job. Haul the maximum pay-load and cash in on advantages never before obtainable. **LOW MAINTENANCE . . . LIGHT-WEIGHT CONSTRUCTION, YET DURABLE . . . LONGER TIRE WEAR . . . PERFECTLY CONTROLLED BRAKE TORQUE WHICH ELIMINATES CHATTERING.** Yes, truly this Dual-Axle Unit will increase your profits and assure longer, more satisfying service.

Get your Dual-Axle by Grico now. It's easily and quickly done and will permit you to haul the maximum load with long trouble free operation.

FOR ADDITIONAL INFORMATION AND PRICES, WRITE



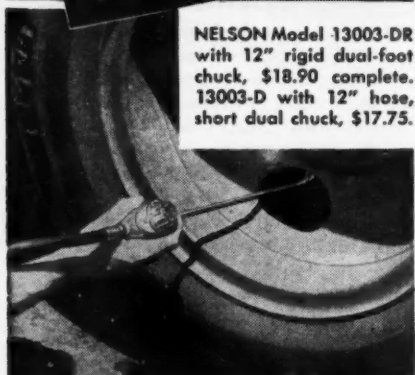
GRICO TWO AXLE DRIVE COMPANY

19840 W. EIGHT MILE ROAD
DETROIT 19, MICHIGAN

*Save Time
Save Tires*
WITH

**NELSON
EQUAMATIC
INFLATORS**

NELSON Model 13003-DR with 12" rigid dual-foot chuck, \$18.90 complete. 13003-D with 12" hose, short dual chuck, \$17.75.



SAVE TIME . . . just dial correct pressure, press chuck on tire valve stem; the NELSON "flips its own switch" when right pressure is reached. It's easy, it's fast—no gauge watching, no valving off!

SAVE TIRES . . . you get exactly equal pressures in each pair or set of tires, automatically! No "unbalanced" inflation to cause shimmy, hard steering, uneven tire wear. NELSON accuracy is *tops*; easiest inflator to keep accurate . . . recalibrate it right on air line! Get extra tire mileage by maintaining exact pressure recommended by manufacturer.

LOW COST . . . the NELSON costs little to buy, nothing to install, practically zero to maintain! It's simple, rugged; full year's service guarantee!



ADDED SAFETY . . . with Model 13003-S, grip chuck locks on stem. You just dial correct pressure, lock chuck on stem. Step aside, out of danger if loose rim lets go. Price complete, \$17.95.

START SAVING NOW . . . order from your jobber or write us today for free literature.

* **EQUAL pressure in each pair of tires — AUTOMATICALLY!**

BARMOTIVE
PRODUCTS INCORPORATED

440 PERALTA AVENUE
SAN LEANDRO, CALIFORNIA

October Roundup

Continued from Page 228

Kansas City Southern Transport Co., Shreveport, La.—to 55 drivers. They represent a total of 179 years of safe over-the-road and city driving.

Cooper Motor Lines, Inc., Greenville, S. C.—to 27 drivers. Top awards went to drivers with four-year no-accident records.

Southwest Freight Lines, Inc., Kansas City, Kan.—to 33 drivers. An \$8500 bonus was distributed among the award-winning drivers.

Atlantic Coast Freight Lines, Inc., Baltimore, Md.—to 37 drivers. They represent a total of 5,316,000 miles of accident-free truck driving.

William Schluderberg—T. J. Kurdle Co. (EssKay), Baltimore, Md.—to 41 drivers. One of the winners has a record of 23 years of no-accidents.

Rodeo Champions

State Truck Rodeo winners and last year's defending champions scheduled to take part in the National Truck Rodeo held late last month include:

Defending National Champions: Straight Truck, Perry H. Reid, Pilot Freight Carriers, Inc., Winston-Salem, N. C.; Single Axle, Morgan N Strickland, Great Southern Trucking Co., Atlanta; Tandem Axle, Alexander Adamski, Chicago, Geo. F. Alger Co., Detroit.

(TURN TO PAGE 232, PLEASE)

DIESEL PARTS

Series 71
278A-268A
12-567 ATL
Hercules - Buda
FM 38D - 8½
"Caterpillar" Price list on request

RODER-BLACKBURN
INTERNATIONAL CORPORATION
149 Broadway, New York 6, N. Y.

GALION

the name to remember for...

- HYDRAULIC HOISTS
- HYDRAULIC END-LOADERS
- DUMP BODIES FOR ALL PURPOSES

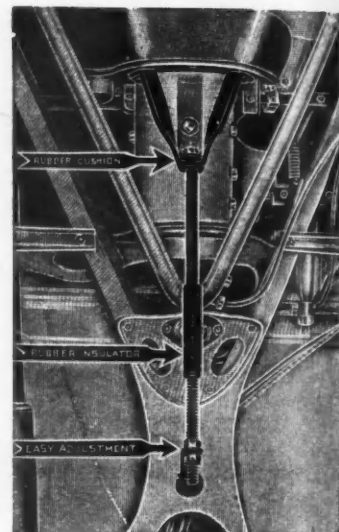
The **GALION** Allsteel Body Company

GALION • OHIO

REAL TROUBLE SHOOTERS

for Winter Servicing!

Here are a few of the many Champ-Items you will need to put the car in shape for winter driving. More than 200 Automotive Replacement Parts featured in Champ-Items Catalog No. 53. Write for your copy.



No. 577 CLUTCH CHATTER TIE ROD for Ford and Mercury cars, 1936-38 models. Eliminates clutch chatter. Can be installed in few minutes. List \$4.00 per set. (Will not fit convertible models.)

No. 578 CLUTCH CHATTER TIE ROD for Chevrolet 1932-51. Eliminates clutch chatter which occurs in forward and reverse speeds. (Will not fit power guide or convertible models.) List \$4.00 per set.



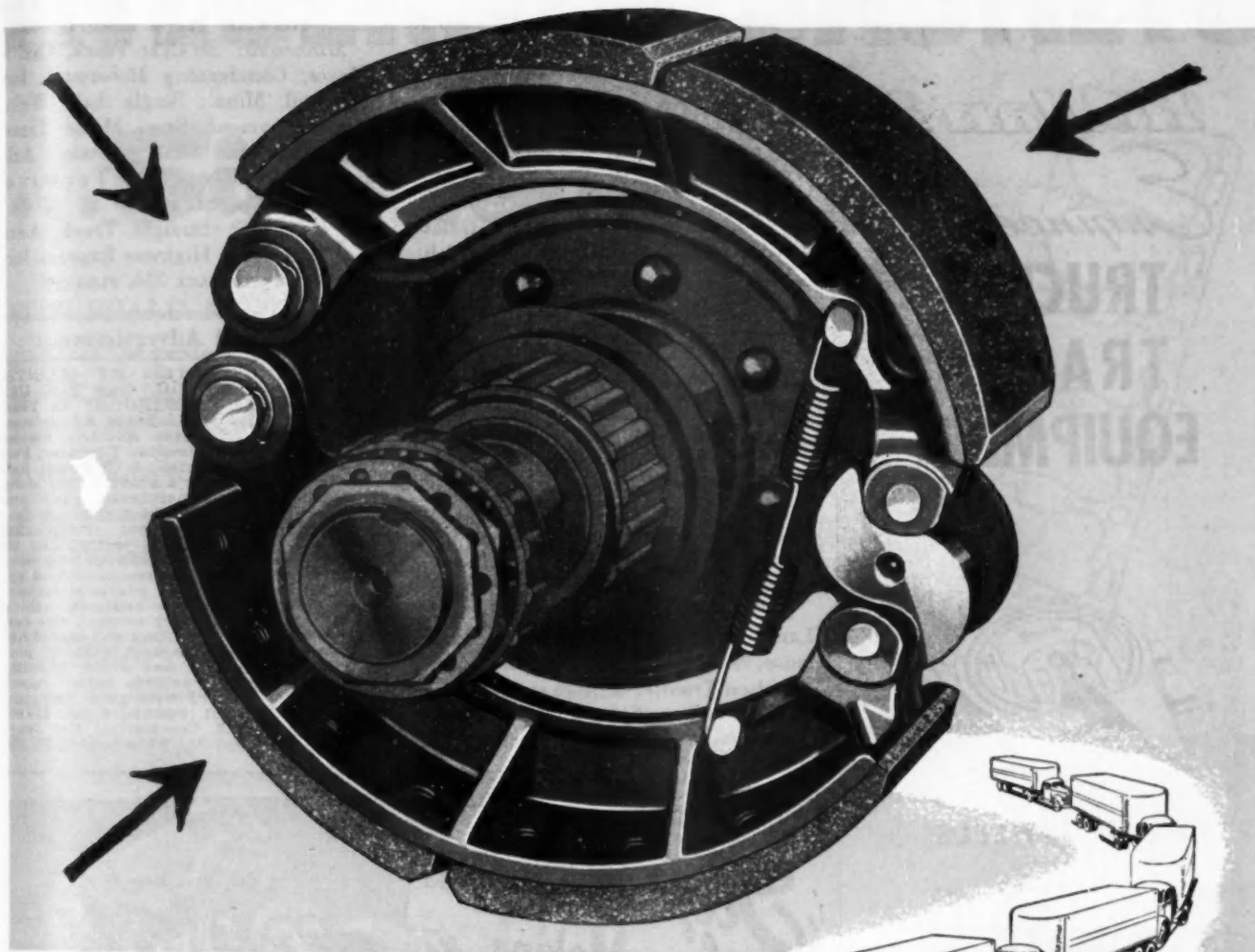
No. 445ABC BATTERY HOLD-DOWNS with adjustable clamps for most popular makes. Three sizes: No. 445A 9¼"x7¼" List 90c each; No. 445B 10½"x7½" List 90c each; No. 445C 19½"x4½" List \$1.00 each. There are many Champ-Items battery servicing items including hold-down bolts for most cars and trucks.

ORDER FROM
YOUR JOBBER



CHAMP-ITEMS, INC.
6191 Maple Ave., St. Louis 14, Mo.

Fleet Safety starts HERE!



All that stands between your equipment and costly accident is $\frac{1}{4}$ " to $\frac{3}{8}$ " of brake lining thickness.

Important as driver training and preventive maintenance programs are, when your vehicle is in a potential accident situation, you must still be equipped with a top quality brake lining.

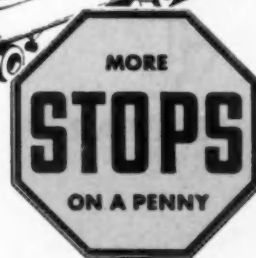
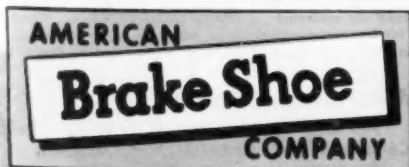
That's why leading heavy-duty operators make American Brakeblok their first choice. They know it is completely dependable throughout its longer lining life. Wears slowly, evenly. Protects drums. Keeps maintenance costs low.

Give your fleet this same, sure protection. Order American Brakeblok from your N.A.P.A. jobber, today.

★ ★ ★

Brake problems?—An American Brakeblok Service Engr. will help you solve them. Write American Brakeblok.

Copyright 1953, American Brake Shoe Company



American Brakeblok

THE SAFETY BRAKE LINING

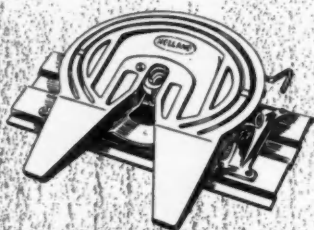


AMERICAN BRAKEBLOK DIVISION
DETROIT 9, MICHIGAN

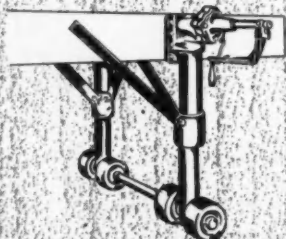
Plants in: Detroit, Michigan; Winchester, Virginia; Lindsay, Ontario; GII, France

**FOR CONSISTENTLY
BETTER PERFORMANCE**

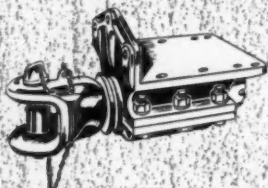
Holland Engineered TRUCK & TRAILER EQUIPMENT



FIFTH WHEELS



LANDING GEAR



PINTLE HOOKS

**SUPERIOR PRODUCTS
ACHIEVED THROUGH 41
YEARS OF LEADERSHIP**



**HOLLAND HITCH
COMPANY**

HOLLAND

MICHIGAN

October Roundup

Continued from Page 230

Connecticut: Straight Truck, John J. Ronczka, Windsor, Conn., Associated Transport, Inc.; Single Axle, Stanley A. Dubberke, P. Ballantine & Sons Brewery, Hartford; Tandem Axle, Earl F. Predom, West Haven, Conn., V & L Trucking Co., New Haven.

Illinois: Straight Truck, Willis C. Brown, Central Transfer Co., Galesburg; Single Axle, Robert F. Leftwich, Central Transfer Company, Rock Island; Tandem Axle, Donald W. Miller, Central Transfer Co., Peoria.

Kansas: Straight Truck, Ben H. Darnell, Coleman Lamp & Stove Co., Wichita; Single Axle, Paul Mendenhall, Dick's Transfer, Kansas City; Tandem Axle, Derald W. Roach, Western Star Mill Co.

Maine: Straight Truck, Gerald K. Shaw, Portland, Hannaford Bros. Co., Portland, Me.; Single Axle, Philip R. Leach, Hannaford Bros. Co., Portland.

Maryland: Straight Truck, Clyde F. Lanham, Albert F. Goetze, Inc., Baltimore; Single Axle, William K. Heiser, Davidson Transfer & Storage Co., Baltimore; Tandem Axle, Charles R. Jacobs, Davidson Transfer & Storage Co.

Michigan: Straight Truck, Anthony Karr, Geo. F. Alger Co., 3050 Lonyo Rd., Detroit; Single Axle, Edgar C. Walker, Kramer Bros. Freight Lines, Inc., Detroit; Tandem Axle, Fred Reiland, Norwalk Truck Line, Dearborn.

Minnesota: Straight Truck, Carl A. Moyer, Glendenning Motorways, Inc., St. Paul, Minn.; Single Axle, Walter Voigt, Raymond Bros. Motor Trans., Inc., St. Cloud, Minn.; Tandem Axle, Fred Fohernkamm, Jr., Terminal Transport Co., St. Paul.

Mississippi: Straight Truck, Adam B. Stuart, Dixie Highway Express, Inc., (TURN TO PAGE 234, PLEASE)

Classified Advertisement

SITUATION WANTED BY MAINTENANCE SUPERVISOR. CAN YOU USE THIS MAN'S EXPERIENCE? 18 Years Fleet Maintenance; 15 Years Administrative; Proven Executive Ability. Education—Graduate Automotive Engineer. Personal—Age 39; Married; 3 Children; References. Have made a study of the motor transportation and maintenance problems for the operation of light and heavy duty gas and diesel equipment. Responsible for planning, developing, testing and installing preventive maintenance programs; initiate and administer mechanic and apprentice shop training; evaluate maintenance methods, failure analysis, vehicle specifications; inventory control, tire cost per mile records; inspection procedure; unit cost systems; budget control; purchasing; estimating and labor negotiations. I have an enviable safety record and excellent record with good personnel relations. Present remuneration \$10,000 annually. Box 13, Commercial Car Journal, 5601 Chestnut St., Philadelphia 39, Pa.



As long as water vapor is not completely vented from the crankcase, condensed water and lube oil will continue to build sludge and "varnish." On stop-and-go operations, where the temperature of the crankcase is relatively low, you'll have even more sludge formation than on long-haul runs.

Get Rid of That Water as Fast as It Forms

That's the function of Magnus Metaffin. You add it regularly to your lube oil, maintaining a suitable concentration in accordance with the type of road service on which your trucks are operated.

As long as this concentration is maintained in your lube oil, Metaffin will keep condensed water finely divided and dispersed throughout the body of the oil, in a condition that insures thorough venting. Sludge cannot form, because the essential ingredient, condensed water, will not be present.

TRY IT ON A COUPLE OF ENGINES!

Watch for improved oil economy . . . better compression . . . faster starting . . . and above all for materially reduced maintenance costs. We'll be glad to supply the necessary Metaffin at no cost if you'll pick the engines for the trial!



MAGNUS CHEMICAL CO., INC.

38 South Ave., Garwood, N. J.

In Canada: Magnus Chemicals, Ltd., Montreal
Service Representatives in Principal Cities

FITZGERALD GASKETS

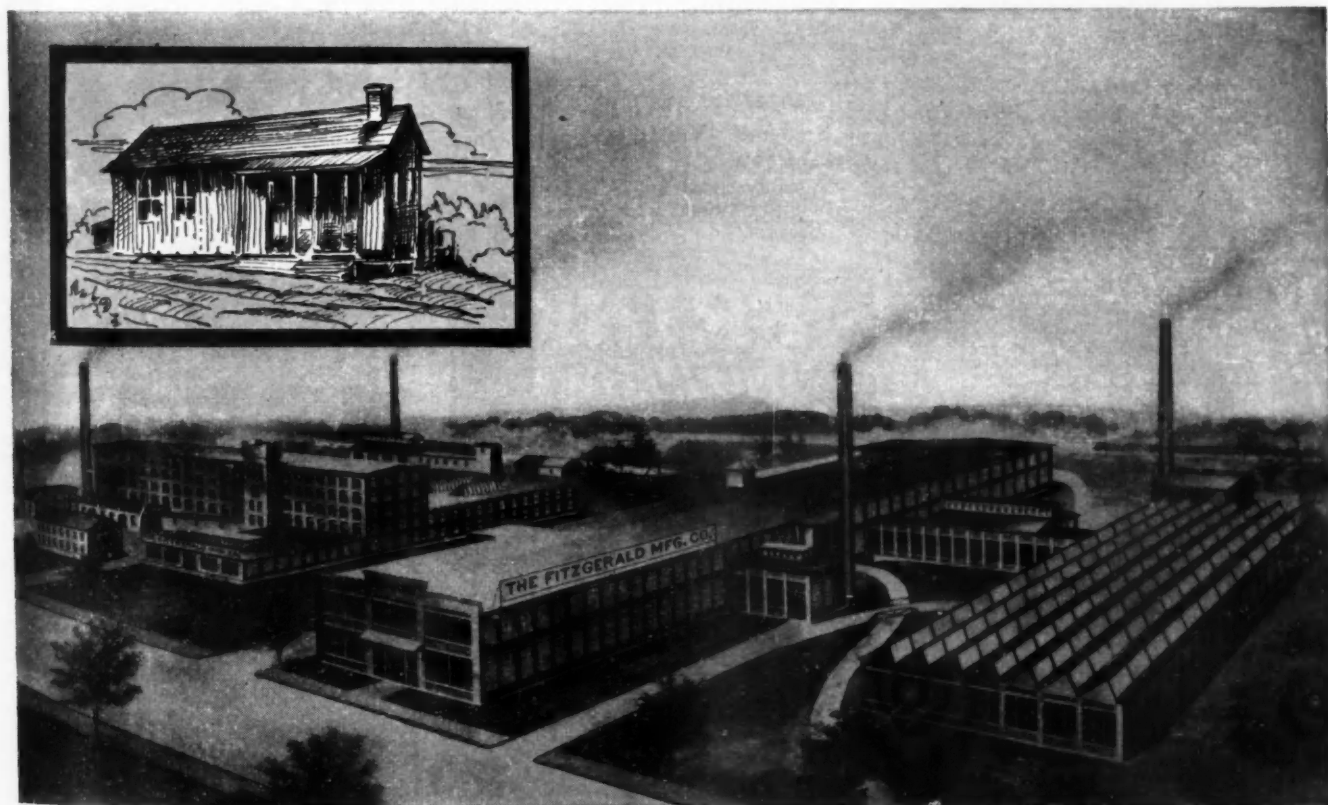
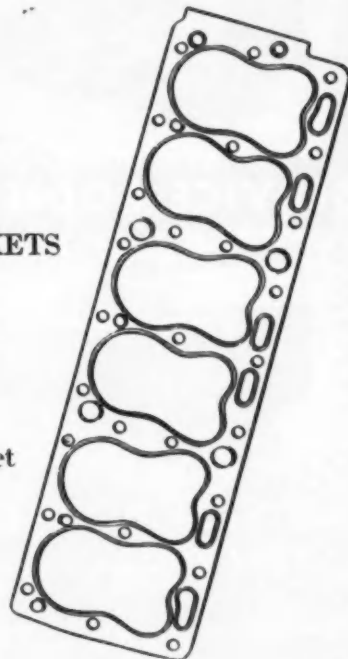
...Since 1906

FITZGERALD METALLIC ALUMINUM FUSED ASBESTOS GASKETS

give you the perfect answer to your need for a perfect, lasting seal against the higher heat and pressures of modern high compression engines. Just as our "log cabin factory" of 1906 has grown to our present plant, so have Fitzgerald Gaskets kept pace with the engineering advances of the automotive industry. A truly complete line, there's a Fitzgerald Gasket for every engine . . . gasoline or diesel.

also...

GREASE RETAINERS • CORK GASKETS FITZ-RITE TREATED FIBRE GASKETS FOR OIL, GASOLINE AND WATER CONNECTIONS COMPLETE SETS FOR MOTOR REBUILDERS



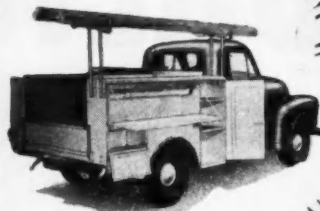
Today's Executive Offices and Present Plant



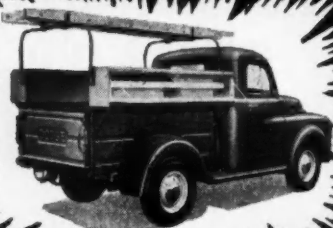
THE FITZGERALD MANUFACTURING COMPANY
TORRINGTON, CONNECTICUT

Canadian FITZGERALD Ltd.—Toronto, Canada
Branch and Warehouse—Los Angeles, California; Chicago, Illinois

CRAFTSMAN



SERVICE BODIES



and SIDE BOXES ...SAVE YOU MONEY!

Whether you buy Craftsman bodies built-up (ready to mount on chassis) or partially knocked-down (to save on freight costs) you get all-steel, precision welded bodies built to give you l-o-n-g service!

YET YOU PAY LESS

MAIL COUPON NOW
for complete details

NAME _____

ADDRESS _____

CITY _____ STATE _____

I am interested in a service body for the following chassis:

☐ 1/2 TON ☐ 3/4 TON

☐ 1 TON ☐ 1 1/2 TON

I am interested in Side Boxes to convert my "Pick Up" to a Service Body. ☐

Stahl METAL PRODUCTS Inc.
3490 W. 140 St., Cleveland 11, Ohio

October Roundup

Continued from Page 232

Meridian, Miss.; Single Axle, Kelly Harris, Standard Oil of Kentucky, Jackson; Tandem Axle, Melvin R. Moore, Dixie Highway Express, Inc., Meridian.

Montana: Straight Truck, Gus A. Adams, Consolidated Freightways, Inc., Great Falls; Single Axle, Zenas A. Buckner, Northern Pacific Transport Co., Billings; Tandem Axle, Albert D. Bone, A. J. Bone, Broadus.

Nebraska: Single Axle, Joe K. Fleming, Union Freightways, Omaha; Tandem Axle, Arthur L. Jackson, Denver-Chicago Trucking Co., North Platte, Nebr.

New Hampshire: Straight Truck, Harold E. Hersey, J. E. Faltin Motor Transp., Inc., Manchester; Single Axle, Earl W. Watson, Southwestern N. H. Transportation Co., Inc., Wilton, N. H.

North Carolina: Straight Truck, Charles M. Collins, Johnson Motor Lines, Inc.; Single Axle, Alvin S. Massey, Central Motor Lines, Inc., Charlotte; Tandem Axle, Malvern H. Morgan, Jr., Youngblood Truck Lines, Fletcher, N. C.

Pennsylvania: Straight Truck, Edward E. Costello, Pilot Freight Carriers, Inc., Philadelphia; Single Axle, Howard J. Pudliner, Motor Cargo, Inc., Allentown, Pa.; Tandem Axle, William S. Broadbelt, Coastal Tank Lines, Inc., Folcroft, Pa.

(TURN TO PAGE 236, PLEASE)

FRINK SNO-PLOWS

Both "V" TYPE and
ONE WAY BLADE TYPE

hand or power hydraulic control
FOR ALL MOTOR TRUCKS
FROM 1 1/4 to 10 TONS

FRINK SNO-PLOWS, INC., CLAYTON, 1000 Isl., N.Y.
DAVENPORT-BESLER CORP., DAVENPORT, IOWA
FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.



COVER 70% OF ALL
MAKES OF TRUCKS
AND BUSES ARE

Zollner EQUIPPED

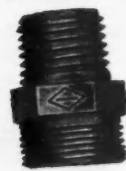
ZOLLNER
HEAVY DUTY PISTONS

ZOLLNER MACHINE WORKS

The Tube Coupling with the Vibration and Shock Absorbing Sleeve.

IMPERIAL FLEX FITTINGS

Ideal for trucks and fleets
because they stand up under



MAJOR VIBRATION
SHOCK

MINOR TUBE
MOVEMENT

This Synthetic Elastic Sleeve Absorbs Vibration and Shock... assures a positive pressure-tight seal... stands up under the most severe operating conditions.



THE IMPERIAL BRASS MFG. CO.
1209 W. Harrison St., Chicago 7, Ill.

IMPERIAL

Time Savers...
KEN TIRE CHANGING TOOLS
...they're "Job Designed"



KEN-TOOLS are hand forged from chrome nickel alloy steel... heat treated for extra long life... Best By Actual Test!

KEN-TOOL...
LARGEST EXCLUSIVE
MAKERS OF
TIRE AND WHEEL
CHANGING TOOLS

See Your Local Jobber for Our Complete Line
The KEN-TOOL Mfg. Co.
Akron 5, Ohio

HEAVY DUTY
MOTOR TRUCKS
GASOLINE ELECTRIC
GENERATING SETS

DUPLEX

TRUCK COMPANY
LANSING, MICHIGAN

FOR GREATER SAFETY

VICKERS *Greyhound Specified* **HYDRAULIC POWER STEERING**

700* on **(400)** New Coaches



Always searching for ways to further increase passenger safety, Greyhound Lines selected Vickers Hydraulic Power Steering for the **(400)** new Model PD-4104 GM Coaches recently purchased. **700***

Vickers Hydraulic Power Steering prevents the possible loss of driver control when a vehicle is forced off the pavement onto a soft shoulder . . . or when a front tire blows out. Extra steering power and quick maneuverability are always available for emergency conditions.

The Vickers System absorbs all road shock and transmits it to the vehicle frame . . . there can be no kick-back at the

*Order has been increased to 700 buses

VICKERS hydraulic
POWER STEERING
is Effortless
Positive and Shockless

6478

ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

COMMERCIAL CAR JOURNAL, October, 1953

steering wheel. The driver supplies only enough effort to slightly move a servo valve . . . fatigue is thus greatly reduced and the driver is more alert.

Only minor alterations are usually required to incorporate Vickers Hydraulic Power Steering in new and existing vehicle designs. For further information, ask for new Bulletin M-5104.

VICKERS Incorporated

DIVISION OF THE SPERRY CORPORATION

1418 OAKMAN BLVD. • DETROIT 32, MICH.

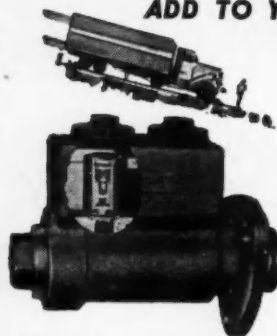
Application Engineering Offices: ATLANTA • CHICAGO (Metropolitan)
CINCINNATI • CLEVELAND • DETROIT • HOUSTON • LOS ANGELES (Metropolitan)
NEW YORK (Metropolitan) • PHILADELPHIA • PITTSBURGH • ROCHESTER
ROCKFORD • SEATTLE • TULSA • WASHINGTON • WORCESTER

Vickers Hydraulic Power Steering
Booster does the actual work of
steering



Engine-driven Vickers Vane Pump (with integral
volume control and relief valves, and oil reservoir)
supplies power for steering.

ADD TO YOUR TRUCK SAFETY—CUT YOUR POWER BRAKE COSTS IN HALF!



MICO

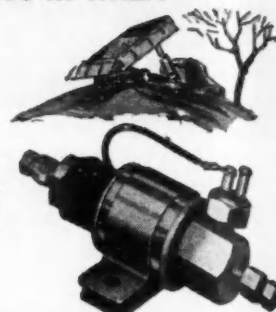
POWER BRAKE CYLINDER

STOP! The powerful 2-stage MICO Power Brake Cylinder progresses in mid-action from a low-pressure to a high-pressure cylinder. Insures smoother, surer stops. Replaces the hydraulic master cylinder. Simple to install.

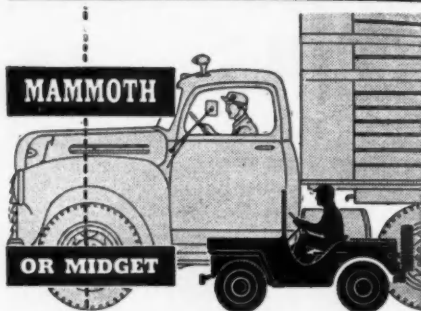
MICO

BRAKE LOCK

HOLD! Flip the switch—step on the brake pedal and you have more dependable holding power than ever before attained with any emergency brake. The MICO Brake Lock is simple to install in any hydraulic braking system.



WRITE FOR CATALOGS
AND NAME OF YOUR NEAREST MICO DISTRIBUTOR
MINNESOTA AUTOMOTIVE, INC. MANKATO, MINNESOTA



U.S. AXLE SHAFTS

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October Roundup

Continued from Page 234

Ohio: Straight Truck, Robert E. Husted, The Standard Oil Co., Columbus; Single Axle, Paul R. Taylor, Standard Oil Co., Cincinnati; Tandem Axle, Everal E. Kirby, Motor Cargo, Inc., Akron.

Tennessee: Straight Truck, Aubrey L. Harper, Super Service Motor Freight, Chattanooga; Single Axle, Marshall A. Ryan, Georgia Highway Express, Inc., Chattanooga; Tandem Axle, Eugene Roache, Mason & Dixon Lines, Inc., Kingsport.

Virginia: Straight Truck, James E. Helsley, Smith's Transfer Corp. of Staunton; Single Axle, Raymond C. Polis, East Coast Freight Lines, Richmond; Tandem Axle, Harry P. Trice, Associated Transport, Inc., Richmond.

West Virginia: Straight Truck, Thomas W. McCutchen, Storck Baking Co., Parkersburg, W. Va.; Single Axle, Elmer R. Raines, The Kroger Company, Charleston; Tandem Axle, William A. Tinsley, The Kroger Company, Charleston.

Wisconsin: Straight Truck, Frederick G. Kromholz, Motor Transport Co., Milwaukee; Single Axle, Melvin Krueger, Motor Cargo, Inc., Milwaukee; Tandem Axle, Russell Sheldon, Motor Cargo, Inc., Milwaukee.

END

Please Resume Reading Page 64

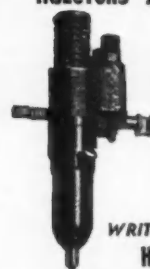
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 October, 1953

Roadbuilder reports

100% MORE LIFE FROM Willard BATTERIES ...on Heavy-Duty Equipment like this



With South Dakota temperatures ranging between -40° and $+102^{\circ}\text{F.}$, dependable battery performance is mighty important to the Leo E. Plut Company of Sisseton, S. D.

That's why this company's earth-moving equipment and cars are equipped *exclusively* with long-lasting, quick-starting Willard Batteries. As reported by Leo E. Plut, owner, Willard Batteries are averaging twice the life of batteries previously used . . . with resulting savings of hundreds of dollars per year in battery replacement costs alone.

Even if your main interest in roads is in their condition rather than their construction, remember that there is no more severe test of battery quality and endurance than that provided by punishing roadbuilding service. And the Willard Batteries that stand up so well here are the same batteries that give lowest cost-per-mile service in *all* types of commercial service.



Willard HDW-1-100 heavy-duty batteries are used in the large earth-moving unit shown with Mr. Leo E. Plut in the upper illustration. HDW-2-115 heavy-duty Willard Batteries are used in "Cat" tractor shown in inset.

Why not schedule a survey of your battery requirements by one of Willard's experienced battery engineers? Just write and let us know when you would like to see him.

Through Service we Grow

WILLARD STORAGE BATTERY COMPANY

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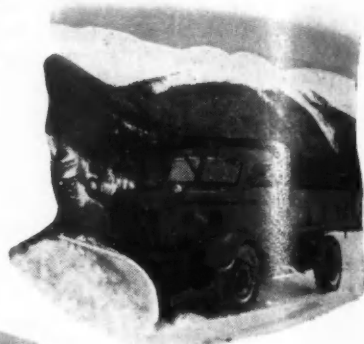
ROTARY PLOWS

... FWD trucks make the finest working platforms for any rotary plow made. Sturdily built, well balanced, they're ideal for highway clearing or in-city truck loading.



ONE-WAY PLOWS

... easily mounted on any of the wide range of FWD truck models. Powerful, with a good range of working speeds. Also available in the Light Duty Model LD.



For drift-busting action get FWD extra traction

Choose FWD —
America's first
choice for fast,
low-cost snow and
ice removal

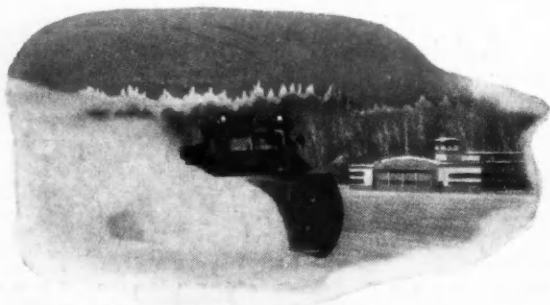


V-TYPE PLOWS

... choice of many truck models. Power on front wheels provides excellent steering ability when plow wings are attached.

UNDERBODY BLADE

... the FWD Maintainer has over 60 different uses, including grading in the summer and removing hard-packed snow or ice in the winter.

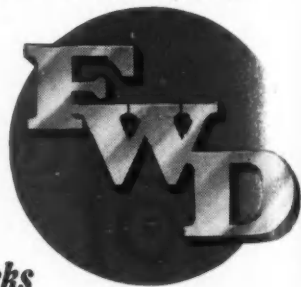


HIGH SPEED AIRPORT PLOW

... FWD Model AU clears snow from airports at speeds to 35 m.p.h. ... keeps airports open *all* winter ... eliminates high banks ... handles work as easily as much costlier equipment.

FWD's basically right design properly distributes weight and power to all wheels ... not only assures extra traction and more dependable operation, but permits straight-ahead plowing action. There's no tendency to veer or skid off to the side in heavy going. Wherever you find highly efficient snow removal — you'll find rugged FWDs leading the way. See your nearest FWD Dealer for all the details on the great FWD line.

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